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PUBLICATIONS

STATES AND STRUCTURES

I. Atomic and Molecular Physics

A. M. Vlaicu (NIRM), Y. Ito, T. Mukoyama (Kansai Gaigo-Daigaku): *M*-shell satellite structure of W x-ray emission lines, *Rad. Phys. & Chem.*, **61**, 401 (2001)

Y. Ito, T. Tochio, H. OoHashi, N. Shigeoka: Double-electron excitation above Xe *K*-edge, *Rad. Phys. & Chem.*, **61**, 405 (2001)

K. Aoki (Himeji Institute of Technology), Y. Ito, A. M. Vlaicu (NIRM): Probability of nuclear excitation by electron transition in Os atoms, *Phys. Rev. C*, **64**, 044609 (2001)

Y. Ito, A. M. Vlaicu (NIRM), N. Shigeoka, H. OoHashi: Double electron transitions [*MN*] or [*MO*] above ^{74}W M_{III} edge in x-ray absorption spectra, *J. Synchrotron. Rad.*, **8**, 249 (2001)

[Others]

Y. Ito, A. M. Vlaicu (NIRM), and T. Tochio: High resolution x-ray emission spectroscopy, *CP576, Application of Accelerators in Research and Industry - Sixteenth Int'l. Conf., edited by J. L. Duggan and I. L. Morgan (AIP)* (2001)

S. Emura (Osaka Univ.), K. Mutaguchi, Y. Ito, Y. Takabayashi (Okayama Univ.) and Y. Kubozono (Okayama Univ.): Local Lattice Instability of Cuprous Ions in NaBr and NaCl, *CP554, Physics in Local Lattice Distortions, edited by H. Oyanagi and A. Bianconi*, 309-14 (2001)

N. Shigeoka, H. OoHashi, T. Tochio, Y. Ito, A. M. Vlaicu (NIRM) and S. Emura (Osaka Univ.): *K α* x-ray spectra on L_{III} and L_{II} shell in Cr_2O_3 , *Spring-8 User Experiment Report No.6 (2000B)* (2001)

T. Tochio, N. Shigeoka, H. OoHashi, Y. Ito, A. M. Vlaicu (NIRM) and S. Emura (Osaka Univ.): Change in profile of Zn *K α* emission spectrum with increase of excitation photon energy, *Spring-8 User Experiment Report No.6 (2000B)* (2001)

II. Electron Microscopy and Crystal Chemistry

Fujiwara E, Irie S, Nemoto T, Isoda S and Kobayashi T: A Scanning Tunneling Microscopy Study on the Monolayer Epitaxy of [Cyano(ethoxycarbonyl)methylene]-4,5-dimethyl-2-ylidene-1,3-dithiole on the (0001) Graphite Surface and its Dynamic Feature, *Surf. Sci.*, **459**, 390-400 (2000)

Isoda S, Hahakura S, Ogawa T, Koshino M and Kobayashi T: Morphology and Surface Plasmon of Platinum Fine Particles formed with a Surfactant, *Trans. Mater. Res. Soc. Jpn.*, **25**, 975-978 (2000)

Irie S, Isoda S, Kobayashi T, Ozaki H and Mazaki Y: STM Study on Photopolymerization of 17,19-hexatriacontadiyne Monolayer, *Probe Microscopy*, **2**, 1-9 (2000)

Tosaka M, Kamiji T, Tsuji M, Kohjiya S, Ogawa T, Isoda S and Kobayashi T: High-resolution Transmission Electron Microscopy of Crystal Transformation in Solution-Grown Lamellae of Isotactic Polybutene-1, *Macromolecules*, **33**, 9666-9672 (2000)

Isoda S, Nemoto T, Fujiwara E, Adachi Y and Kobayashi T: Orientation Fluctuation of Organic Monomolecular Layers at

Liquid/Solid Interfaces, *J. Cryst. Growth*, **229**, 574-579 (2001)

Fujiwara E, Isoda S, Ogawa T, Kobayashi T and Yamashita Y: Effect of Molecular Symmetry and Packing Efficiency on the Epitaxial Growth Modes of Monomolecular Film on Graphite Studied by STM; The case of 2,4,6-tris(4,5-dimethyl-1,3-dithiol-2-ylidene)-1,3,5-cyclohexanetrione, *Sur. Sci.*, **487**, 118-126 (2001)

Tosaka M, Endo Y, Murakami S, Tsuji M, Kohjiya S, Ogawa T and Isoda S: High-resolution Electron Microscopy of Lamellar Crystals of Syndiotactic Polypropylene, *Seni-Gakkai-si*, **57**, 244-246 (2001)

Yaji T, Yoshida K, Isoda S, Kobayashi T, Sato N and Shirota I: AFM Observation of Phase Transition Process of Bis(1,2-benzoquinonedioximato)Platinum(II), *Thin Solid Films*, **392**, 319-324 (2001)

Maeda T, Kobayashi T, Nemoto T and Isoda S: Lattice Defects in Organic Crystals Revealed by Direct Molecular Imaging, *Phil. Mag.*, **81**, 1659-1667 (2001)

[Others]

Isoda S: Analysis of Structures and Electronic States by Electron Spectromicroscopy, *Seni Gakkaishi*, **57**, 76-79 (2001) (*in Japanese*)

III. Polymer Condensed States

Kohjiya S, Murakami K, Iio S, Tanahashi T and Ikeda Y: In Situ Filling of Silica onto "Green" Natural Rubber by the Sol-Gel Process, *Rubber Chem. Technol.*, **74**, 16-27 (2001)

Ikeda Y, Kitade T, Kohjiya S, Hayashi A, Matsuda A, Tatsumisago M, Minami T, Ion Conducting Composites form $\text{Li}_2\text{S-SiS}_2\text{-Li}_4\text{SiO}_4$ Oxysulfide Glass and Poly(oxyethylene)s, *Polymer*, **42**, 7225-28 (2001)

Hayashi A, Kitade T, Ikeda Y, Kohjiya S, Matsuda A, Tatsumisago M and Minami T: Preparation and Characterization of Lithium Ion Conducting Glass-Polymer Composites, *Chem. Lett.*, **No.8**, 814-15 (2001)

Urayama K, Yokoyama K and Kohjiya S: Viscoelastic Relaxation of Guest Linear Poly(dimethylsiloxane) in Endlinked Poly(dimethylsiloxane) Networks, *Macromolecules*, **34**, 4513-18 (2001)

Kawamura T, Urayama K and Kohjiya S: Multiaxial Deformations of End-linked Polydimethylsiloxane Networks. 1. Phenomenological Approach to Strain Energy Density Function, *Macromolecules*, **34**, 8252-60 (2001)

Urayama K, Kawamura T and Kohjiya S: Multiaxial Deformations of End-linked Polydimethylsiloxane Networks. 2. Experimental Tests of Molecular Entanglement Models of Rubber Elasticity, *Macromolecules*, **34**, 8261-69 (2001)

Bedia EL, Murakami S, Kitade T and Kohjiya S: Structural Development and Mechanical Properties of Polyethylene Naphthalate/Polyethylene Terephthalate Blends During Uniaxial Drawing, *Polymer*, **42**, 7229-305 (2001)

Ohta M, Hyon S-H, Kang Y-B, Murakami S, Kohjiya S, Oka M and Tsutsumi S: Effect of the Compression Ratio on Wear Properties of Slightly Cross-linked Ultra-High Molecular Weight Polyethylene, Crystallized under Uniaxial Compression, *Wear*, **250**, 145-51 (2001)

Kawahara Y, Kikutani T and Tsuji M: Influences of Interfibrillar Voids and Surface Morphology of Dyeing High-Speed Spun PET Fibers:, *Amer. Assoc. Textile Chemists Colorists Review (AATCC Review)*, **1**, 34-38 (2001)

Shimizu T, Tsuji M and Kohjiya S: *In situ* TEM Observation of Crystallization of Isotactic Polystyrene, *Sen'i Gakkaishi*, **57**, 137-43 (2001)

Tsuji M, Fujita M, Shimizu T and Kohjiya S: Fine Structures of Curved Edge-On Lamellae in Crystalline Thin Films of Isotactic Polystyrene As Revealed by Transmission Electron Microscopy, *Macromolecules*, **34**, 4827-33 (2001)

Fujita M, Tsuii M, Murakami S, Kohjiya S and Wittmann J C: Solution-Grown Single Crystals of Perfectly Alternating Ethylene-Carbon Monoxide Copolymer, *Macromolecules*, **34**, 6147-51 (2001)

Kawahara Y, Hananouchi T, Tsuji M, Kimura T and Kohjiya S: Fibrillation of Silk Fibers from Japanese Oak Silkworm (*Antheraea yamamai*), *J. Seric. Sci. Jpn.*, **70**, 109-15 (2001) (in Japanese)

Fujita M, Tsuji M and Kohjiya S: Perfectly Alternating Ethylene-Carbon Monoxide Copolymer Crystallized Epitaxially on Alkali Halides. 3. Lamellar and Crystalline-Core Thicknesses, *Macromolecules*, **34**, 7724-29 (2001)

Bedia E L, Tsuji M, Tosaka M, Ohara M and Kohjiya S: Morphologies of Melt-Crystallized Thin Films of Nylon-6, Nylon-6,6, and Their Blends As Revealed by Transmission Electron Microscopy, *J. Macromol. Sci.-Phys.*, **B 40**, 1079-96 (2001)

Senoo K, Endo K, Tosaka M, Murakami S and Kohjiya S: Polymorphic Behavior of Syndiotactic Polystyrene-based Graft Copolymers with Polystyrene and Polyisoprene Side Chains, *Macromolecules*, **34**, 1267-73 (2001)

Tosaka M, Endo Y, Murakami S, Tsuji M and Kohjiya S: Quantitative Analysis of Stacking Faults in Lamellar Crystals of Syndiotactic Polypropylene Grown from the Melt, *Sen'i Gakkaishi*, **57**, 207-11 (2001) (in Japanese)

Tosaka M, Endo Y, Murakami S, Tsuji M, Kohjiya S, Ogawa T and Isoda S: High-Resolution Electron Microscopy of Lamellar Crystals of Syndiotactic Polypropylene, *Sen'i Gakkaishi*, **57**, 244-46 (2001)

[Others]

Kohjiya S: Natural Rubber: Its Past and Future, *Proc. 2nd Int. Workshop on Green Polymers*, Indonesian Polym. Assoc., pp.16-17 (2001)

Ikeda Y and Kohjiya S: High-Molecular Mass Branched Poly(oxyethylene) for Solid Electrolyte, *Proc. 2nd Int. Workshop on Green Polymers*, Indonesian Polym. Assoc., pp.87-98 (2001)

Kohjiya S and Ikeda Y: Role of Amorphous Matrix Prepared from High Molecular Weight Branched Poly(oxyethylene)s for Lithium Ionic Conduction, *Recent Res. Devel. Electrochem.*, **4**, 99-109 (2001)

Senoo K, Kohjiya S and Endo K: Development and Perspective of Novel Elastomer Materials with Metallocene Catalysts, *Nippon Gomu Kyokaishi*, **74**, 432-36 (2001) (in Japanese)

Urayama K: Ultimate Elongation of Elastomers and Ultra-High Extensibility of Deswollen Polymer Gels, *Nippon Gomu Kyokaishi*, **74**, 347-51 (2001) (in Japanese)

INTERFACE SCIENCE

I. Solutions and Interfaces

Matubayasi N, Nakao N, and Nakahara M: Structural Study of Supercritical Water. III. Rotational Dynamics, *J. Chem. Phys.*, **114**, 4107-4115 (2001)

Saito H, Tanaka M, Okamura E, Kimura T, Nakahara M, Handa T: Interactions of Phosphatidylcholine Surface Monolayers with Triglyceride Cores and Enhanced ApoA-1 Binding in Lipid Emulsions, *Langmuir*, **17**, 2528-2532 (2001)

Yamaguchi T, Matubayasi N, and Nakahara M: A Mode-coupling Approach to the Attractive Interaction Effect on the Solute Diffusion in Liquids, *J. Chem. Phys.*, **115**, 422-432 (2001)

McNamee CE, Matsumoto M, Hartley PG, Mulvaney P, Tsujii Y, and Nakahara M: Interaction Forces and Zeta Potentials of Cationic Polyelectrolyte Coated Silica Surfaces in Water and in Ethanol: Effects of Chain Length and Concentration of Perfluorinated Anionic Surfactants on their Binding to the Surface, *Langmuir*, **17**, 6220-6227 (2001)

McNamee CE, Matsumoto M, Hartley PG, and Nakahara M: Adsorption of Quarternarised Polyvinylpyridine and Subsequent Counterion Binding of Perfluorinated Anionic Surfactants on Silica as a Function of Concentration and pH: A Zeta Potential Study, *Colloids and Surfaces A*, **193**, 175-185 (2001)

Okamura E, Kimura T, Nakahara M, Tanaka M, Handa T, and Saito H: ¹³C NMR Method for the Determination of Peptide and Protein Binding Sites in Lipid Bilayers and Emulsions, *J. Phys. Chem. B*, **105**, 12616-12621 (2001)

Miura Y, Kimura S, Imanishi Y and Umemura J: Cation Recognition by Self-Assembled Monolayers of Oriented Helical Peptides Having a Crown Ether Unit., *Biopolymers*, **55**, 391-398 (2000)

Hasegawa T, Nishijo, J, Umemura J and Theiss W: Simultaneous Evaluation of Molecular-Orientation and Optical Parameters in Ultrathin Films by Oscillators-Model Simulation and Infrared External-Reflection Spectrometry, *J. Phys. Chem. B*, **105**, 11178-11185 (2001)

Huo Q, Sui G, Zheng Y, Keele P, Hasegawa T, Nishijo, J, Umemura J and Leblanc R M: Metal Complexation with Langmuir Monolayer of Histidyl Peptide Lipids, *Chem. Eur. J.*, **7**, 4796-4804 (2001)

Yamaguchi T and Kimura Y: Non-Gaussian Dynamics of a Dilute Hard-sphere Gas, *J. Chem. Phys.* **114**, 3029-3034 (2001)

Yamaguchi T and Hirata F: Site-site Mode Coupling Theory for the Shear Viscosity of Molecular Liquids, *J. Chem. Phys.* **115**, 9340-9345 (2001)

[Others]

Okamura E and Nakahara M: NMR Studies on Lipid Bilayer

Interfaces Coupled with Anesthetics and Endocrine Disruptors (Chapter 32), in *Liquid Interfaces in Chemical, Biological, and Pharmaceutical Applications*, Volkov AG Ed., Marcel Dekker, New York, pp.775-805 (2001)

Okamura E and Nakahara M: NMR Study on Location of Anesthetics in Membranes, *Masui to Sosei*, **36**, 179-180 (2000) in Japanese

Okamura E, Kakitsubo R, and Nakahara M: NMR Specification of Lipid Bilayer Interfaces as Drug Delivery Sites, in *Studies in Surface Science and Catalysis*, Eds. Iwasawa Y, Oyama N, and Kunieda H, Elsevier, **132**, 1045-1048 (2001)

Okamura E: NMR Study of Drug Delivery Mechanisms from Water to Membranes, *High Polymers, Japan*, **50**, 666 (2001) in Japanese

Nakahara M, Tsujino Y, Wakai C, and Matubayasi N: Structure and Dynamics of Water: From Ambient to Supercritical, *J. Mol. Liquids*, **90**, 75-83 (2001)

Nakahara M: NMR Study on Delivery of Endocrine Disruptors From Water to Model Biomembranes, *Ishikawajima Harima Gihou*, **41**, 197-206 (2001) in Japanese

Yoshida S, Miwa K, and Nakahara M: Reaction Mechanism of Desulfurization of Thiophene in Supercritical Water by NMR, *Ishikawajima Harima Gihou*, **41**, 207-210 (2001) in Japanese

Nakahara M: Preface. Progress in Physics and Chemistry of Solution Chemistry, *J. Mol. Liq.*, **90**, ix-x (2001)

Nakahara M: Theoretical and Experimental Studies on Aqueous Solutions under Extreme Conditions, *Gakujutsu Geppou*, **54**, 902-906 (2001) in Japanese

Nakahara M et al.: Handbook of Sciences, **74**, National Observatory, Maruzen (2001) in Japanese

Umemura J: Raman Spectroscopy, *Handbook of Interfaces: Chemistry and Engineering*, Iwasawa Y, Umezawa Y, Sawada M, and Tsujii K, Eds., NTS Inc., Tokyo, pp.107-109 (2001) in Japanese

II. Molecular Aggregates

Brechignac C, Cahuzac P, Kebaili N, Leygnier J and Yoshida H: Interband Effect in the Optical Response of Strontium Clusters, *Phys. Rev. B*, **61**, 7280-3 (2000).

Sato N, Sakuma T, Yoshida H, Silinsh E A and Jurgis A J: Molecular Orbital Calculations of Nonlinear Optical Parameters for Test Molecules of a Highly Amphoteric and Polar Molecule (HAPM), *Mol. Cryst. Liq. Cryst.*, **355**, 319-29 (2001).

Yaji T, Yoshida K, Isoda S, Kobayashi T, Sato N and Shirotani I: AFM Observation of Phase Transformation Process of Bis(1,2-benzoquinonedioximate)platinum(II), *Thin Solid Films*, **393**, 319-24 (2001).

Yoshida H, Tsutsumi K and Sato N: Unoccupied Electronic States of 3d-Transition Metal Phthalocyanines (MPc: M = Mn, Fe, Co, Ni, Cu and Zn) Studied by Inverse Photoemission Spectroscopy, *J. Elect. Spectrosc. Relat. Phenom.*, **121**, 83-91 (2001).

Terao H, Sugawara T, Kita Y, Sato N, Kaho E and Takeda S: Proton Relay in a One-Dimensional Hydrogen-Bonded Chain Composed of Water Molecules and a Squaric Acid Derivative, *J. Am.*

Chem. Soc., **123**, 10468-74 (2001).

[Others]

Sato N, Yoshida H and Tsutsumi K: Observations of the Electronic Structures of Unoccupied States in Evaporated Organic Thin Films by Means of Inverse Photoemission Spectroscopy, *Mol. Electr. Bioelectr.*, **12**, 163-8 (2001) (in Japanese).

Asami K and Zhao K S: Dielectric Monitoring of Cell Growth in Culture Using an Inductive Probe, Proceedings of XI International Conference on Electrical Bio-Impedance, 209-211 (2001).

III. Hydrospheric Environment Analysis

Norisuye K, Hasegawa H, Mito S, Sohrin Y and Matsui M: A method for preconcentrating Zr from large volumes of seawater using MnO₂-impregnated fibers, *Talanta*, **53**, 639-644 (2000).

Hasegawa H, Matsui M, Suzuki M, Naito K, Ueda K and Sohrin Y: The possibility of regulating the species composition of marine phytoplankton using organically complexed iron, *Anal. Sci.*, **17**, 209-211(2001).

Fujishima Y, Ueda K, Maruo M, Nakayama E, Tokutome C, Hasegawa H, Matsui M and Sohrin Y: Distribution of Trace Bioelements in the Subarctic North Pacific Ocean and the Bering Sea (the R/V Hakuho-Maru Cruise KH-97-2), *J. Oceanogr.*, **57**, 261-273 (2001).

Hasegawa H, Sohrin Y, Seki K, Sato M, Norisuye K, Naito K and Matsui M: Biosynthesis and release of methylarsenic compounds during the growth of freshwater algae, *Chemosphere*, **43**, 265-272 (2001).

Obata H, Nozaki Y, Okamura K, Maruo M and Nakayama E: Flow-Through Analysis of Aluminum in Seawater by Fluorometric Detection with the Use of Lumogallion, *Field Anal. Chem. and Technol.*, **4**, 274-282 (2000).

Sohrin Y, Fujishima Y, Chiba A and Ishita T: Development of a multi-elemental determination of ultratrace metals in seawater, *Bunseki Kagaku*, **50**, 369-382 (2001) (in Japanese).

Umetani S, Tsurubou S, Komatsu Y and Enomoto S: Ion-Size-Selective Masking Effect in Metal Ion Separation, *RIKEN Accel. Prog. Rep.*, **34**, 151-152 (2001).

Okamura K, Sugiyama M, Obata H, Maruo M, Nakayama E and Karatani H: Automated determination of vanadium(IV) and (V) in natural waters based on chelating resin separation and catalytic detection with Bindshedler's green leuco base, *Anal. Chim. Acta*, **443**, 143-151 (2001).

Okamura K, Kimoto H, Saeki K, Ishibashi J, Obata H, Maruo M, Gamo T, Nakayama E and Nozaki Y: Development of a deep-sea in situ Mn analyzer and its application for hydrothermal plume observation, *Mar. Chem.*, **76**, 17-26 (2001).

Kitano T, Sohrin Y, Hata Y, Kawakami H, Hori T and Ueda K: Selectivity of sterically efficient [HB(pz₃)]⁻ and crowded [B(pz)₄]⁻ for first-series transition metals and Cd, *J. Chem. Soc., Dalton Trans.*, 3564-3571 (2001).

[Others]

Sohrin Y: Tungsten and molybdenum in seawater, *Gekkan Kaiyo Gogai*, **25**, 122-126 (2001) (in Japanese).

Tamaki K, Cherkashov G and Knipovich-2000 Scientific Party: Japan-Russia Cooperation at the Knipovich Ridge in the Arctic Sea, *InterRidge News*, **10**, 48-51 (2001).

Sohrin Y: Iron fertilization experiment in the North Pacific Ocean -Investigating the possibility of carbon dioxide sequestration to the deep sea-, *Bunseki*, **8**, 423-424 (2001) (in Japanese).

Sohrin Y: Unexpected Turn of Trace Elements, In *Umi to Kankyō*, ed. The Oceanographic Society of Japan, pp. 171-180, Kodansya (2001) (in Japanese).

SOLID STATE CHEMISTRY

I. Artificial Lattice Alloys

Roldan Cuenya B, Doi M, Marks O, Keune W and Mibu K: Reflection High-Energy Electron Diffraction and ^{119}Sn Mössbauer Investigation of Epitaxial a-Sn Films, *Proceedings of the Workshop on Structure and Dynamics of Heterogeneous Systems*, World Scientific, 251-263 (2000)

Oshima N, Saito M, Ohashi K, Yamamoto H and Mibu K: Structural and Magnetic Properties of High Saturation Induction CoNiFe Electroplated Films, *IEEE Trans. on Magnetics*, **37**, 1767-1769 (2001)

Gupta A, Paul A, Mukhopadhyay S and Mibu K: Grazing Incidence X-ray Scattering Study of the Structure of Epitaxial Cr/Sn Multilayers, *J. App. Phys.*, **90**, 1237-1241 (2001)

Mibu K, Almokhtar M, Nakanishi A, Kobayashi T and Shinjo T: Magnetic Properties of Cr Layers in X/Cr/Sn/Cr Multilayers (X = V, Fe, Ag) Studied through ^{119}Sn Mössbauer Spectroscopy, *J. Magn. Magn. Mater.*, **226-230**, 1785-1787 (2001)

Ono T, Ooka Y, Kasai S, Miyajima H, Mibu K and Shinjo T: Magnetic and Transport Properties of Magnetic Wires Down to 20 nm in Width, *J. Magn. Magn. Mater.*, **226-230**, 1831-1832 (2001)

Kasai S, Niiyama T, Ono T, Miyajima H, Mibu K and Shinjo T: Galvanomagnetic Effect in Very Narrow Ni Wire at Low Temperature, *J. Mag. Soc. Jpn.*, **25**, 699-702 (2001) (in Japanese)

Sakurai J, Kuwai T, Huo D, Ono T, Shigeto K and Shinjo T: Transport Properties of Cu/Permalloy Artificial Layers, *J. Phys. Soc. Jpn.*, **70**, 505-508 (2001)

Ono T, Ooka Y, Kasai S, Miyajima H, Nakatani N, Hayashi N, Shigeto K, Mibu K and Shinjo T: Magnetization Reversal and Electric Transport in Ferromagnetic Nanowires, *Materials Science and Engineering B*, **84**, 126-132 (2001)

Kawagoe T, Suzuki Y, Nyvlt M, Franta J and Hosoi N: Magnetic Domain Structure and Exchange Coupling in Epitaxial Fe/FeRh(001) and NiFe/FeRh(001) Bilayers, *Surface Science*, **493**, 721-730 (2001)

II. Quantum Spin Fluids

Sato T, Kamiyama T, Takahashi T, Kurahashi K, Yamada K, Observation of dx^2-y^2 -like Superconducting Gap in an Electron-Doped High-Temperature Superconductor, *Science* **291**, 1517-1519 (2001)

Takahashi T, Naitoh Y, Sato T, Kamiyama T, Yamada K, Hiraka H, Endoh Y, Ueda M, Hamada N, Para-ferro magnetic phase tran-

sition of CoS_2 studied by high-resolution photoemission spectroscopy, *Phys. Rev. B*, **63**, 094415 (2001)

Lee S.-H., Cheong S.-W., Yamada K., Majkrzak C. F., Charge and canted spin order in $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ($x = 0.275$ and $1/3$), *Phys. Rev. B* **63**, 060405(R) (2001)

Singley E. J., Basov D. N., Kurahashi K., Uefuji T., Yamada K., Electron dynamics in $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$: Evidence for the pseudogap state and unconventional c -axis response, *Phys. Rev. B*, **64**, 224503 (2001)

Hiraka H, Endoh Y, Fujita M, Lee Y.S, Kulda J, Ivanov A, Borgeneau R.J, Spin fluctuations in the underdoped high-Tc cuprate $\text{La}_{1.935}\text{Sr}_{0.07}\text{CuO}_4$, *J. Phys. Soc. Jpn.*, **70**, 853-858 (2001)

Koike Y, Akoshima M, Aoyama M, Nishimaki K, Kawamata K, Adachi T, Noji T, Kato M, Watanabe I, Ohira S, Higemoto W, Nagamine K, Kimura H, Hirota K, Yamada K, Endoh Y, Cu-site-substitution effects on the $1/8$ anomaly in the high-Tc cuprates and on the anomaly at $x=0.21$ in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$, *Advances in Superconductivity*, **13**, 82-88 (2001)

Uefuji T, Kubo T, Yamada K, Fujita M, Kurahashi K, Watanabe I, Nagamine K, Coexistence of antiferromagnetic ordering and high-Tc superconductivity in electron-doped superconductor $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$, *Advances in Superconductivity*, **13**, 208-211 (2001)

Watanabe I, Uefuji T, Kurahashi K, Fujita M, Yamada K, Nagamine K, Muon spin relaxation study on magnetic properties of $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$ around a boundary between the magnetically ordered and superconducting states, *Advances in Superconductivity*, **13**, 212-215 (2001)

Goka H, Fujita M, Yamada K, Effect of structural symmetry on the magnetic and superconducting properties in $\text{La}_{1.875}\text{Ba}_{0.125}\text{Sr}_x\text{CuO}_4$, *Advances in Superconductivity*, **13**, 256-259 (2001)

Yamamoto N, Ishida T, Okuda K, Kurahashi K, Yamada K, Superconducting anisotropy in $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ single crystals, *Advances in Superconductivity*, **13**, 298-301 (2001)

Sato T, Naitoh Y, Kamiyama T, Takahashi T, Yokoya T, Yamada K, Endoh Y, Kadowaki K, Small and large pseudogaps in high-Tc superconductors observed by ultrahigh-resolution photoemission spectroscopy, *Physica C*, **341-348**, 815-818 (2000)

Fujita M, Goka H, Yamada K, Electronic phase diagram of $\text{La}_{1.875}\text{Ba}_{0.125}\text{Sr}_x\text{CuO}_4$, *Int. J. Mod. Phys. B*, **14**, 3466-3471 (2001)

Matsuda M, Birgeneau R.J, Endoh Y, Fujita M, Hiraka H, Kastner M.A, Shirane G, Wakimoto S, Yamada K, Neutron scattering studies on lightly-doped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$, *J. Phys. Soc. Jpn.*, **70**, 46-48 (2001) Suppl. A

Fujita M, Goka H, Yamada K, Static spin correlation in LTT phase of $\text{La}_{1.875}\text{Ba}_{0.125}\text{Sr}_x\text{CuO}_4$, *J. Phys. Soc. Jpn.*, **70**, 48-50 (2001) Suppl. A

Endoh Y, Fukuda T, Wakimoto S, Arai M, Yamada K, Bennington S.M. Dynamical magnetic susceptibility in the optimum doped LSCO with $T_c=37\text{K}$, *J. Phys. Soc. Jpn.* **69**, 16-21, (2000) Suppl. B.

Takahashi T, Sato T, Yokoya T, Kamiyama T, Naitoh Y, Mochiku T, Yamada K, Endoh Y, Kadowaki K, Two types of pseudogaps in high-Tc superconductors, *J. Phys. Chem. Solids* **62**, 41-45 (2001)

Kimura H, Hirota K, Aoyama M, Adachi T, Kawamata T, Koike Y, Yamada K, Endoh Y, Neutron-Scattering Study of Incommensurate Elastic Magnetic Peaks in $\text{La}_{2-x}\text{Sr}_x\text{Cu}_{1-y}\text{Zn}_y\text{O}_4$ ($x=0.21$, $y=0.01$), *J. Phys. Soc. Jpn.*, **70**, 52-54 (2001)

[Other]

Fujita M, Yamada K, Neutron scattering study on magnetic and charge orders in La-based 214 system, Bussei Kenkyu (Kyoto), **76**, 535-547 (2001) (in Japanese)

III. Solid State Chemistry

Griend D A V, Poeppelmeier K R, Toganoh H, Azuma M and Takano M: High Pressure Synthesis of Cuprate Perovskites, *Physica C*, **341-348**, 335-338 (2000).

Sato T, Naitoh Y, Kamiyama T, Takahashi T, Yokoya T, Mesot J, Kaminski A, Fretwell H, Campuzano J C, Ding H, Chong I, Terashima T, Takano M and Kadowaki K: Superconducting Gap, Pseudogap, and Fermi Surface of Bi2201: High Energy- and Momentum-Resolution Photoemission Study, *Physica C*, **341-348**, 2091-2094 (2000).

Johnston D C, Saito T, Azuma M, Takano M, Yamauchi T and Ueda Y: Modeling of the Magnetic Susceptibilities of the Ambient- and High-Pressure Phases of $(\text{VO})_2\text{P}_2\text{O}_7$, *Phys. Rev. B*, **64**, 134403-1-134403-23 (2000).

Takeda T, Kanno R, Kawamoto Y, Takano M, Kawasaki S, Kamiyama T and Izumi F: Metal-Semiconductor Transition, Charge Disproportionation, and Low-Temperature Structure of $\text{Ca}_{1-x}\text{Sr}_x\text{FeO}_3$ Synthesized under High-Oxygen Pressure, *Solid State Sciences*, **2**, 673-687 (2000).

Ueda A, Ohta H, Okubo S, Hiroi Z, Okumura M and Takano M: Submillimeter-Wave ESR Measurements of $\text{Ca}_{1-x}\text{CuO}_2$ ($x=0.164$) with Edge-Sharing CuO_2 Chains, *Appl. Magn. Reson.*, **19**, 399-402 (2000).

Larkin M I, Fukamoto Y, Gat I M, Kinkhabwala A, Kojima K M, Luke G M, Merrin J, Nachumi B, Uemura Y J, Azuma M, Saito T and Takano M: Exponential Field Distribution in $\text{Sr}(\text{Cu}_{1-x}\text{Zn}_x)_2\text{O}_3$, *Physica B*, **289-290**, 153-156 (2000).

Mukuda H, Ishida K, Kitaoka Y, Kanno R and Takano M: Spin Fluctuations in Ruthenium Oxides Proved by Ru-NMR, *Physica B*, **284-288**, 1467-1468 (2000).

Hayashi N, Terashima T and Takano M: Epitaxial Growth and Transport Properties of SrFeO_3 Thin Film, *Ferrites: Proceedings of the 8th International Conference on Ferrites (ICF8)*, Sep. 18-21, 25-27, 2000, Kyoto and Tokyo (ed. Abe M and Yamazaki Y), 633-635 (2000).

Sato T, Naitoh Y, Kamiyama T, Takahashi T, Yokoya T, Mesot J, Kaminski A, Fretwell H, Campuzano J C, Ding H, Chong I, Terashima T, Takano M and Kadowaki K: High-Resolution Angle-Resolved Photoemission Study of Pb-Substituted Bi2201, *J. Phys. & Chem. Solids*, **62**, 157-161 (2001).

Hayashi N, Terashima T and Takano M: Epitaxial Growth and Physical Properties of SrFeO_3 Thin Film, *Funtai oyobi Funmatsu Yakin*, **48**, 177-179 (2001) (in Japanese).

Masuno A, Terashima T and Takano M: Preparation and Properties of the Micro-Sized Wires and Dots of the Perovskite-Type manganese Oxides, *Funtai oyobi Funmatsu Yakin*, **48**, 180-183 (2001) (in Japanese).

Masuda T, Kondo Y, Miwa M, Shimotori T, Mukai S R, Hashimoto K, Takano M, Kawasaki S and Yoshida S: Recovery of Useful Hydrocarbons from Oil Palm Waste Using ZrO_2 Supporting FeOOH Catalyst, *Chem. Eng. Sci.*, **56**, 897-904 (2001).

Narumi Y, Kimura S, Hirai S, Kindo K, Schwenk H, Schmidt S, Wolf B, Lüthi B, Saito T, Azuma M and Takano M: High-Field Magnetization Measurements on Single Crystals, *Physica B*, **294-295**, 71-74 (2001).

Ohta H, Okubo S, Sakurai T, Goto T, Kirita K, Ueda K, Uwatoko Y, Saito T, Azuma M, Takano M and Akimitsu J: High-Frequency ESR Measurements Using Pulsed Magnetic Fields in Kobe, *Physica B*, **294-295**, 624-629 (2001).

Yamada T, Hiroi Z and Takano M: Spin-1/2 Quantum Antiferromagnetic Chains with Tunable Superexchange Interactions Found in $\text{BaCu}_2(\text{Si}_{1-x}\text{Ge}_x)_2\text{O}_7$, *J. Solid State Chem.*, **156**, 101-109 (2001).

Sato T, Kamiyama T, Naitoh Y, Takahashi T, Chong I, Terashima T and Takano M: Fermi Surface and Superconducting Gap in Superstructure-Free $\text{Bi}_{1.80}\text{Pb}_{0.38}\text{Sr}_{2.01}\text{CuO}_{6-d}$, *Phys. Rev. B*, **63**, 132502-1-132502-4 (2001).

Saito T, Azuma M, Fujita M and Takano M: Observation of the Spin Gap in a $S=1/2$ Alternating Chain Compound, High Pressure Phase of $(\text{VO})_2\text{P}_2\text{O}_7$, *J. Phys. Soc. Jpn.*, **70**, 183-185 (2001).

Kawakami T, Nasu S, Sasaki T, Morimoto S, Endo S, Kawasaki S and Takano M: Charge Disproportionation and Magnetic Order of CaFeO_3 under High Pressure up to 65 GPa, *J. Phys. Soc. Jpn.*, **70**, 1491-1494 (2001).

Sato T, Kamiyama T, Takahashi T, Mesot J, Kaminski A, Campuzano J C, Fretwell H M, Takeuchi T, Ding H, Chong I, Terashima T and Takano M: Evidence for a Hole-Like Fermi Surface of $\text{Bi}_2\text{Sr}_2\text{CuO}_6$ from Temperature-Dependent Angle-Resolved Photoemission Spectroscopy, *Phys. Rev. B*, **64**, 054502-1-054502-5 (2001).

Ishiwata S, Azuma M, Saito T, Kawasaki S and Takano M: Single Crystal Growth of CaFeO_3 at High Pressure, *Funtai oyobi Funmatsu Yakin*, **48**, 715-718 (2001) (in Japanese).

Hayashi N, Terashima T and Takano M: Oxygen-Holes Creating Different Electronic Phases in Fe^{4+} -Oxides: Successful Growth of Single Crystalline Films of SrFeO_3 and Related Perovskites at Low Oxygen Pressure, *J. Mater. Chem.*, **11**, 2235-2237 (2001).

Ohsugi S, Kitaoka Y, Azuma M, Fujishiro Y, Takano M, Nagata T, Fujino H and Akimitsu J: Cu NMR/NQR Studies on Magnetism in Impurity/Hole-Doped Spin-Ladder Compounds, *Hyperfine Interactions*, **133**, 157-162 (2001).

Sato T, Kamiyama T, Nishina S, Takahashi T, Chong I, Terashima T and Takano M: Fermi Surface Topology of Bi2201 Studied by Temperature-Dependent Angle-Resolved Photoemission Spectroscopy, *Physica C*, **364-365**, 590-593 (2001).

IV. Amorphous Materials

Tokuda Y, Uchino T and Yoko T: Vibrational dynamics of glassy SiS_2 on the basis of molecular orbital calculations, *J. Non-Cryst. Solids*, **282**, 256-264 (2001)

Enkhtuvshin D, Takahashi M, Zhao G and Yoko T: Photoelectro-

chemical Properties of the Sol-Gel Derived $Ti_{1-x}V_x$ Thin Film Electrodes, *J. Ceram. Soc. Jpn.* **109**, 666-670 (2001)

Uchino T, Takahashi M and Yoko T: E' -Centers in Amorphous SiO_2 : Revisited: A New Look at an Old Problem, *Pys. Rev. Lett.*, **86**, 5522-25 (2001)

Takahashi M., Tsukigi K, Uchino T and Yoko T: Enhanced Photocurrent in Thin Film TiO_2 Electrodes Prepared by Sol-Gel Method, *Thin Solid Films*, **388**, 231-236 (2001)

Uchino T, Takahashi M and Yoko T: Structure and Formation Mechanism of the E' Center in Amorphous SiO_2 , *Appl. Pys. Lett.*, **78**, 2730-32 (2001)

Uchino T, Takahashi M and Yoko T: Structure and Generation Mechanism of the Peroxy-Radical Defect in Amorphous Silica, *Pys. Rev. Lett.*, **86**, 4560-63 (2001)

Sakida S, Hayakawa S and Yoko T: ^{125}Te , ^{27}Al and ^{71}Ga NMR Study of M_2O_3 - TeO_2 ($M=Al$ and Ga) Glasses, *J. Am. Ceram. Soc.*, **84**, 836-42 (2001)

Uchino T, Takahashi M and Yoko T: Mechanism of Interconversion among Radiation-induced Defects in Amorphous Silicon Dioxide, *Phys. Rev. Lett.*, **86**(9) 1777-1780 (2001)

Niida H, Uchino T, Jin J, Kim S H, Fukunaga T and Yoko T: Structure of Alkali Tellurite Glasses from Neutron Diffraction and Molecular Orbital Calculations, *J. Chem. Phys.*, **114**(1) 459-467 (2001)

FUNDAMENTAL MATERIAL PROPERTIES

I. Molecular Rheology

Hahn H, Lee J H, Balsara N P, Garetz B A and Watanabe H: Viscoelastic properties of aligned block copolymer lamellae, *Macromolecules* **34**, 8701-9 (2001).

Watanabe H, Matsumiya Y, Kanaya T and Takahashi Y: Rheology and structure of a butadiene-styrene diblock copolymer in dibutyl phthalate: Role of concentration fluctuation in disruption and reformation of micellar lattice, *Macromolecules* **34**, 6742-55 (2001).

Watanabe H, Matsumiya Y, Kakiuchi M and Aoki Y: Rheo-dielectric behavior of carbon black suspensions, *Nihon Reoroji Gakkaishi* **29**, 77-80 (2001).

Matsumiya Y and Watanabe H: Further test of the tube dilation process in star-branched cis- polyisoprene: Role of branching-point fluctuation, *Macromolecules* **34**, 5702-10 (2001).

Kilbey S M, Watanabe H and Tirrell M: Structure and scaling of polymer brushes near the Theta condition, *Macromolecules* **34**, 5249-59 (2001).

Osaki K, Inoue T, Uematsu T and Yamashita Y: Evaluation methods of the longest Rouse relaxation time of an entangled polymer in a semidilute solution, *Journal of Polymer Science Part B-Polymer Physics* **39**, 1704-12 (2001).

Watanabe H: Rheology of diblock copolymer micelles in selective solvents, *Kobunshi Ronbunshu* **58**, 135-46 (2001).

Kakiuchi M, Aoki Y, Watanabe H and Osaki K: Viscoelastic properties of poly(vinyl chloride) gels: Effect of plasticizer type, *Nihon Reoroji Gakkaishi* **29**, 53-9 (2001).

Kakiuchi M, Aoki Y, Watanabe H and Osaki K: Viscoelastic properties of poly(vinyl chloride) gels: Universality of gel elasticity, *Macromolecules* **34**, 2987-91 (2001).

Aoki Y, Hatano A, Tanaka T and Watanabe H: Nonlinear stress relaxation of ABS polymers in the molten state, *Macromolecules* **34**, 3100-7 (2001).

Watanabe H: Dielectric relaxation of type-A polymers in melts and solutions, *Macromolecular Rapid Communications* **22**, 127-75 (2001).

Takahashi Y, Noda M, Naruse M, Kanaya T, Watanabe H, Kato T, Imai M and Matsushita Y: Apparatus for small-angle neutron scattering and rheological measurements under sheared conditions, *Nihon Reoroji Gakkaishi* **28**, 187-91 (2000).

Kakiuchi M, Aoki Y, Watanabe H and Osaki K: Dielectric behavior of PVC gels and sols in dioctyl phthalate, *Nihon Reoroji Gakkaishi* **28**, 197-8 (2000).

Watanabe H, Kanaya T and Takahashi Y: Equilibrium elasticity of diblock copolymer micellar lattice, *Macromolecules* **34**, 662-5 (2001).

Watanabe H, Osaki K, Kakiuchi M and Aoki Y: Viscoelastic properties of poly(vinyl chloride) sols, *Macromolecules* **34**, 666-70 (2001).

Osaki K, Inoue T and Uematsu T: Viscoelastic properties of dilute polymer solutions: The effect of varying the concentration, *Journal of Polymer Science Part B-Polymer Physics* **39**, 211-7 (2001).

Osaki K, Inoue T and Uematsu T: Evaluation methods of the longest Rouse relaxation time of an entangled polymer in a semidilute solution, *Journal of Polymer Science Part B-Polymer Physics* **39**, 17004-7 (2001).

II. Polymer Materials Science

Kanaya T and Kaji K: Neutron Researches on Micro- to Mesoscopic Motions in Polymer Systems, *Rept. Prog. Polym. Phys. Japan*, **43**, 261-286 (2000).

Kanaya T, Tsukushi I, Kaji K, Teraguchi M, Kwak G and Masuda T: Fast Dynamics of Substituted Polyacetylenes in Glassy States and its Relation to Gas Permeability, *J. Phys. Soc. Japan Suppl. A*, **70**, 332-334 (2001).

Patkowski A, Glaeser H, Kanaya T and Fischer E W: Apparent Non-Ergodic Behavior of Supercooled Liquids above the Glass Transition Temperature, *Phys. Rev. E*, **64**, 315031-315037 (2001).

Kanaya T, Tsukushi I, Kaji K, Gabrys B, Bennington S M and Furuya H: Evidence of Localized Picosecond Fast Process in Glassy Poly(methyl methacrylate) far below T_g , *Phys. Rev. B*, **64**, 144202-144206 (2001).

Okada O, Furuya H and Kanaya T: Molecular Dynamics Simulation of cis-1,4-Polybutadiene. 2. Chain Motion and Origin of the Fast Process, *Polymer*, **43**, 977-982 (2002).

Takeshita H, Kanaya T, Nishida K and Kaji K: Spinodal Decomposition and Syneresis of PVA Gel, *Macromolecules*, **34**, 7894-7898 (2001).

Kanaya T and Kaji K: Dynamics in the Glassy State and Near the Glass Transition of Amorphous Polymers As Studied by Neutron Scattering, *Adv. Polym. Sci.*, **154**, 88-141 (2001).

Nishida K, Kaji K and Kanaya T: High concentration crossovers of polyelectrolyte solutions, *J. Chem. Phys.*, **114**, 8671-8677 (2001).

Nishida K, Kaji K and Kanaya T: Improved phase diagram of polyelectrolyte solutions, *J. Chem. Phys.*, **115**, 8217-8220 (2001).

Nishida K, Kaji K and Kanaya T: Theoretical calculation of reduced viscosity of polyelectrolyte solutions, *Polymer*, **42**, 8657-8662 (2001).

Nishida K, Kaji K and Kanaya T, Fanjat N: Determination of intrinsic viscosity of polyelectrolyte solutions, *Polymer*, **43**, 1295-1300 (2002).

[Others]

Kaji K: Development of fiber Technology in the 21st century and the role of the Society of Fiber Science and Technology, Japan, *SEN'I GAKKAISHI* **57**, 9 (2001) (in Japanese).

Kaji K: Highlight in the history of polymer science: Dawn of X-ray diffraction of polymers - Max von Laue, Shoji Nishikawa -, *KOBUNSHI (HIGH POLYMERS), JAPAN* **50**, 468-69 (2001) (in Japanese).

Kaji K: Highlight in the history of polymer science: Controversy against the concept of high polymer molecules and X-ray structure analysis - Michael Polanyi -, *KOBUNSHI (HIGH POLYMERS), JAPAN* **50**, 676-77 (2001) (in Japanese).

III. Molecular Dynamic Characteristics

H. Ishida and F. Horii: Chain Conformation of Spacer Methylene Sequences for a Liquid Crystalline Polyether As Revealed by Solid-State ^{13}C NMR Spectroscopy, *Macromolecules*, **34**, No.22, 7751-7757 (2001).

H. Kaji, T. Tai, and F. Horii: One- and Two-Dimensional MAS ^{13}C NMR Analyses of Molecular Motions in Poly(2-hydroxypropyl Ether of Bisphenol-A), *Macromolecules*, **34**, No.18, 6318-6324 (2001).

T. Nakaoki, Y. Ohira, and F. Horii: Investigation of the Crystallization Process of Syndiotactic Polypropylene Quenched at 0 °C from the Melt or Concentrated Solutions by Solid-State ^{13}C NMR Spectroscopy, *Polymer*, **43**, 4555-4561 (2001).

K. Masuda, H. Kaji, and F. Horii: Solid-State ^{13}C NMR and ^1H CRAMPS Investigations of the Hydration Process and Hydrogen Bonding for Poly(vinyl alcohol) Films, *Polym. J.*, **33**, No.4, 356-363 (2001).

Y. Ohira, F. Horii and T. Nakaoki: Conformational Changes of the Noncrystalline Chains for Syndiotactic Polypropylene as a Function of Temperature: Correlations with the Crystallizations of Form I and Form III, *Macromolecules*, **34**, No.6, 1655-1652 (2001).

K. Kuwabara, F. Horii, and Y. Ogawa: Solid-State NMR Studies on the Orthorhombic-to-Hexagonal Phase Transition for α , ω -alkanediol Crystals, *J. Mol. Struct.*, **569**, 55-64 (2001).

K. Masuda, H. Kaji, and F. Horii: Studies on Different Types of Hydrogen Bonds in Poly(vinyl alcohol) Films by ^1H CRAMPS

and Solid-State Two-Dimensional ^1H - ^{13}C Heteronuclear Correlation Analyses, *Polym. J.*, **33**, 190-198 (2001).

Y. Tsunashima, K. Hattori, H. Kawanishi, and F. Horii, Regioselectively Substituted 6-O- and 2,3-Di-O-acetyl-6-O-triphenylmethyl-cellulose: Its Chain Dynamics and Hydrophobic Association in Polar Solvents, *Biomacromolecules*, **2**, 991-1000(2001).

Y. Tsunashima, Polymer Chain Dynamics in Dilute Solutions under Couette Flow: II. High Molecular Weight Poly(α -methylstyrene) in Good Solvent, *J. Chem. Phys.*, **114**, 9163-9169(2001).

Y. Tsunashima, Variety of Conformations and Structures of Cellulose Derivatives in Solution. *Kobunshi Ronbunshu*, **58**, 171-177 (2001). (in Japanese)

H. Kaji and K. Schmidt-Rohr, Conformation and Dynamics of Atactic Poly(acrylonitrile). 3. Characterization of Local Structure by Two-Dimensional ^2H - ^{13}C Solid-State NMR, *Macromolecules*, **34**, 7382-7391 (2001).

H. Kaji and K. Schmidt-Rohr, Conformation and Dynamics of Atactic Poly(acrylonitrile). 2. Torsion Angle Distributions in Meso Dyads from Two-Dimensional Solid-State Double-Quantum ^{13}C NMR, *Macromolecules*, **34**, 7368-7381 (2001).

[Others]

F. Horii: New Cellulosic Industries in the 21st Century, *Sen'i Gakkaishi*, **57**, P143-P146 (2001). (in Japanese)

F. Horii: Structure of Cellulose: Recent Developments in Its Characterization, in "Wood and Cellulosic Chemistry," D. N.-S. Hon, N. Shiraishi, Eds., Marcel Dekker, New York-Basel, 2001, pp.83-107.

ORGANIC MATERIALS CHEMISTRY

I. Polymeric Materials

Yamada K, Minoda M, Fukuda T and Miyamoto T: Amphiphilic Block and Statistical Copolymers with Pendant Glucose Residues: Controlled Synthesis by Living Radical Cationic Polymerization and The Effects of Copolymer Architecture on Their Properties, *J. Polym. Sci., Polym. Chem.*, **39**, 459-467 (2001).

Ma Y-D, Sung K-S, Tsujii Y and Fukuda T: Free-Radical Copolymerization of Styrene and Diethyl Fumarate. Penultimate-Unit Effects on Both Propagation and Termination Processes, *Macromolecules*, **34**, 4749-4756 (2001).

Goto A, Sato K, Fukuda T, Moad G, Rizzardo E and Thang S H: Mechanism and Kinetics of RAFT-Based Polymerizations of Styrene and Methyl Methacrylate, *Macromolecules*, **34**, 402-408 (2001).

McNamee C E, Matsumoto M, Hartley P G, Mulvaney P, Tsujii Y and Nakahara M: Interaction Forces and Zeta Potentials of Cationic Polyelectrolyte Coated Silica Surfaces in Water and in Ethanol; Effects of Chain Length and Concentration of Perfluorinated Anionic Surfactants on Their Binding to the Surface, *Langmuir*, **17**, 6220-6227 (2001).

Yamamoto S, Tsujii Y and Fukuda T: Characteristic Phase-Separated Monolayer Structure Observed for Blends of Rodlike and Flexible Polymers, *Polymer*, **42**, 2007-2013 (2001).

Ejaz M, Tsujii Y and Fukuda T: Controlled Grafting of a Well-Defined Polymer on a Porous Glass Filter by Surface-Initiated Atom Transfer Radical Polymerization, *Polymer*, **42**, 6811-6815 (2001).

Tsujii Y, Ejaz M, Sato K, Goto A and Fukuda T: Mechanism and Kinetics of RAFT-Mediated Graft Polymerization of Styrene on a Solid Surface. 1. Experimental Evidence of Surface Radical Migration, *Macromolecules*, **34**, 8872-8878 (2001).

Jeong S Y, Jeong J H, Ma Y D and Tsujii Y: Synthesis and Cholesteric Mesophase Properties of (Hydroxypropyl)celluloses, Their Ester and Ether Derivatives, *Polymer (Korea)*, **25**, 279-292 (2001).

Ohno K, Wong B and Haddleton D M: Synthesis of Well-Defined Cycloextrin-Core Star Polymers by Living Radical Polymerization, *J. Polym. Sci., Polym. Chem.*, **39**, 2206-2214 (2001).

[Others]

Fukuda T: Recent Advancement in Living Radical Polymerization: *Expected Materials for the Future (Mirai-zairyo)* **1**, 14-21 (2001). (in Japanese)

Kondo T and Tsujii Y: Versatility of Atomic Force Microscopy (AFM) for Research Fields in Cellulose, *Cellulose Commun.*, **7**, 125-129 (2000). (in Japanese)

Tsujii Y and Fukuda T: Surface Design by Living Radical Polymerization, *Polymer Applications*, **50**, 58-65 (2001). (in Japanese)

II. High-Pressure Organic Chemistry

Matsuura A, Komatsu K: Efficient Synthesis of Benzene and Planar Cyclooctatetraene Fully Annelated with Bicyclo[2.1.1]hex-2-ene, *J. Am. Chem. Soc.*, **123**, 1768-69 (2001)

Komatsu K: Cyclic π -Conjugated Systems Annelated with Bicyclo[2.2.2]octene: Synthesis, Structures, and Properties, *Bull. Chem. Soc. Jpn.*, **74**, 407-19 (2001)

Nishinaga T, Izukawa Y, Komatsu K: The First Silatropylium Ion Stabilized by Rigid σ -Frameworks: Preparation, Properties, and Some Reactions, *Tetrahedron*, **57**, 3645-56 (2001)

Fujiwara K, Komatsu K, Wang G-W, Tanaka T, Hirata K, Yamamoto K, Saunders M: Derivatization of Fullerene Dimer C_{120} by the Bingel Reaction and a ^3He NMR Study of $^3\text{He}@C_{120}$ Monoadducts, *J. Am. Chem. Soc.*, **123**, 10715-20 (2001)

Murata Y, Kato N, Komatsu K: The Reaction of Fullerene C_{60} with Phthalazine: The Mechanochemical Solid-State Reaction Yielding a New C_{60} Dimer versus the Liquid-Phase Reaction Affording an Open-Cage Fullerene, *J. Org. Chem.*, **66**, 7235-39 (2001)

Murata Y, Komatsu K: Photochemical Reaction of the Open-Cage Fullerene Derivative with Singlet Oxygen, *Chem. Lett.*, **2001**, 896-97

Fujitsuka M, Fujiwara K, Murata Y, Uemura S, Kunitake M, Ito O, Komatsu K: Properties of Photoexcited States of C_{180} , a Triangle Trimer of C_{60} , *Chem. Lett.*, **2001**, 384-85

Fujiwara K, Komatsu K: First Synthesis of a Highly Symmetri-

cal Decakis-Adduct of Fullerene Dimer C_{120} , *Chem. Commun.*, **2001**, 1986-87

Murata Y, Murata M, Komatsu K: The Reaction of Fullerene C_{60} with 4,6-Dimethyl-1,2,3-Triazine: Formation of an Open-Cage Fullerene Derivative, *J. Org. Chem.*, **66**, 8187-91 (2001)

Murata Y, Suzuki M, Komatsu K: Synthesis and Electrochemical Properties of Novel Dimeric Fullerenes Incorporated in a 2,3-Diazabicyclo[2.2.2]oct-2-ene Framework, *Chem. Commun.*, **2001**, 2338-39

Suvegh K, Fujiwara K, Komatsu K, Marek T, Ueda T, Vertes A, Braun T: Positron Lifetime in Supramolecular Gamma- and Delta-Cyclodextrin- C_{60} and $-C_{70}$ Compounds, *Chem. Phys. Lett.*, **344**, 263-69 (2001)

Komatsu K: The Solid-State Reaction of Fullerene Using the Mechanochemical High-speed Vibration Milling, *Future Materials Produced by Modern Techniques*, **2001**, 98-111 (in Japanese)

Kitagawa T, Tanaka T, Murakita H, Nishikawa A, Takeuchi K: Reaction of Cyclopropenylm Ions with the tert-Butyl- C_{60} Anion: Carbocation-Carbanion Coordination vs Salt Formation, *Tetrahedron*, **57**, 3537-47 (2001)

Kitagawa T, Takeuchi K: Monofunctionalized C_{60} Ions: Their Generation, Stability, and Reactions, *Bull. Chem. Soc. Jpn.*, **74**, 785-800 (2001)

Takeuchi K, Ushino T, Okazaki T, Kitagawa T, Kinoshita T, Ohga Y, Tanaka K, Toda F: Solvent Effects and Steric Course in the Solvolysis of 1,3,3-Trimethyl-2-oxocyclopentyl Mesylate in Comparison with 1,1,3,3-Tetramethyl-2-oxobutyl System, *Bull. Chem. Soc. Jpn.*, **74**, 363-70 (2001)

Takeuchi K, Okazaki T, Kitagawa T, Ushino T, Ueda K, Endo T, Notario R: Influence of Alkyl Substitution on the Gas-Phase Stability of 1-Adamantyl Cation and on the Solvent Effects in the Solvolysis of 1-Bromoadamantane, *J. Org. Chem.*, **66**, 2034-43 (2001)

Kitagawa T, Takeuchi K: Novel Superacids: Weakly Coordinating Carborane Anions, *Kagaku*, **56**, 58-59 (2001) (in Japanese)

SYNTHETIC ORGANIC CHEMISTRY

I. Synthetic Design

Tamao K, Tsuji H and Toshimitsu A: Stereochemical Control of the Reaction of Chlorosilane with Methylolithium by the Addition of Metal Cyanide: Inversion by Potassium Cyanide and Retention by Copper(I) Cyanide, *Synlett*, 964-966 (2001).

Toshimitsu A, Hirao S, Saeki T, Asahara M and Tamao K: Preparation, Structure, and Reactivity of Pentacoordinate Disilanes Bearing an 8-Charcogeno-1-naphthyl Group and a heteroatom on the Same Silicon Atom, *Heteroatom Chem.*, **12**, 392-397 (2001).

Tsuji H, Toshimitsu A, Tamao K and Michl J: UV, MCD, and LD Spectra of a Conformationally Constrained *ortho*-Tetrasilane: Support for the Avoided Crossing Model of Conformational Effects on Excited States, *J. Phys. Chem. A*, **105**, 10246-10248 (2001).

Toshimitsu A, Saeki T and Tamao K: Phosphonium Sila-ylide: Reaction Pathway Different from Ammonium Sila-ylide but

Similar to Phosphonium Ylide, *J. Am. Chem. Soc.*, **123**, 9210-9211 (2001).

Tsuji H, Toshimitsu A and Tamao K: Some Unique Reactivities of a Diphenyldisilane Unit Incorporated in a Bicyclic Ring System: Generation of a Disilanylolithium via the Silicon-Phenyl Cleavage with Lithium, *Chem. Heterocycl. Comp.*, 1500-1505 (2001).

Kawachi A, Maeda H, Nakamura H, Doi K and Tamao K: Chirality Transfer during the [2,3]-Sila-Wittig Rearrangement and Cyclopropanation Reaction of Optically Active [(sec-Allyloxy)silyl]lithiums, *J. Am. Chem. Soc.* **123**, 3143-3144 (2001).

Kawachi A, Minamimoto T and Tamao K: Boron-Metal Exchange Reaction of Silylboranes with Organometallic Reagents: A New Route to Arylsilyl Anions, *Chem. Lett.*, 1216-1217 (2001).

Kawachi A and Tamao K: Synthesis, Structures, and Reactions of Nitrogen, Oxygen, and Sulfur-Functionalized Silyl Anions, *J. Synth. Org. Chem., Jpn.*, **59**, 892-903 (2001).

Yamaguchi S and Swager T M: Oxidative Cyclization of Bis(biaryl)acetylenes: Synthesis and Photophysics of Dibenzo[*g,p*]chrysene-Based Fluorescent Polymers, *J. Am. Chem. Soc.*, **123**, 12087-12088 (2001).

Yamaguchi S, Akiyama S and Tamao K: Colorimetric Fluoride Anion Sensing by Boron-Containing π -Electron Systems, *J. Am. Chem. Soc.*, **123**, 11372-11375 (2001).

Niyomura O, Sakai K, Murai T, Kato S, Yamaguchi S and Tamao K: The First Alkali Metal Selenothioates: Synthesis and Molecular Structure, *Chem. Lett.*, 968-969 (2001).

Uchida M, Izumizawa T, Nakano T, Yamaguchi S, Tamao K and Furukawa K: Toward Structural Optimization of 2,5-Diarylsiloles as Excellent Electron Transporting Materials for Organic Electroluminescent Devices, *Chem. Mater.*, **13**, 268-272 (2001).

Yamaguchi S, Endo T, Uchida M, Izumizawa T, Furukawa K and Tamao K: Diphenylamino-Substituted 2,5-Diarylsiloles for Single-Layer Organic Electroluminescent Devices, *Chem. Lett.*, 98-99 (2001).

Yamaguchi S, Shirasaka T and Tamao K: Tridurylboranes Extended by Three Arylethynyl Tethers As a New Family of Boron-Based π -Electron Systems, *Org. Lett.*, **2**, 4129-4130 (2000).

[Others]

Yamaguchi S and Tamao K: Polysiloles and Silole-Containing Polymers, in *The Chemistry of Organic Silicon Compounds*, Vol. 3. Ed. by Rappoport Z, Apeloig Y, John Wiley & Sons, Chichester, 2001, pp.641-694.

Yamaguchi S and Tamao K: Silicon-Containing π -Electron Systems: Synthesis and Photophysics of Silole Derivatives, in *New Development for Organosilicon Materials Science*, Ed. by Sakurai H, CMC, Tokyo, 2001, pp. 30-49 (in Japanese).

Yamaguchi S: The Promising Possibilities of Organoelement π -Electron Systems, *Kagaku Kogyo*, **52**, 628-633 (2001) (in Japanese).

II. Fine Organic Synthesis

Kawabata T, Yamamoto K, Momose Y, Yoshida H, Nagaoka Y and Fuji K: Kinetic Resolution of Amino Alcohol Derivatives with a Chiral Nucleophilic Catalyst: Access to Enantiopure Cyclic *cis*-Amino Alcohols, *Chem. Comm*, 2700-2701 (2001)

Tsubaki K, Otsubo T, Kinoshita T, Kawada M and Fuji K: The First Example for Cycloenantiomeric Hexahomooxacalix[3]arenes, *Chem. Pharm. Bull.*, **49**, 507-509 (2001)

Tsubaki K, Morimoto T, Otsubo T, Kinoshita T and Fuji K: Synthesis, Structure, and Ion-Binding Properties of New Tetraoxacalix[3]arenes, *J. Org. Chem.*, **66**, 4083-4086 (2001)

Tsubaki K, Hayashi N, Nuruzzaman M, Kusumoto T and Fuji K: Visual Recognition of Triamines by Phenolphthalein Derivatives: Consideration of the Structure of the Colored Complex, *Org. Lett.*, **3**, 4067-4069 (2001)

Tsubaki K, Nuruzzaman M, Kusumoto T, Hayashi N, Bin-Gui W and Fuji K: Visual Enantiomeric Recognition Using Chiral Phenolphthalein Derivatives, *Org. Lett.*, **3**, 4071-4073 (2001)

Bagul T. D, Lakshmaiah G, Kawabata T, Fuji K: Total Synthesis of Spirotryprostatin B via Asymmetric Nitroolefination, *Org. Lett.*, **4**, 249-251 (2002)

Kawabata T, Kawakami S, Fuji K: Enantioselective α -Allylation of a Phenylalanine Derivative under the Control of Aggregation of a Chiral Nonracemic Enolate, *Tetrahedron Lett.*, **43**, 1465-1467 (2002)

[Others]

Kawabata T: Asymmetric Synthesis Based on Enolate Chemistry: β -Lactam Synthesis and Memory of Chirality, *Rev. Heteroatom Chem.*, **22**, 33-58 (2000)

Kawabata T: Organic Synthesis by Nucleophilic Catalysis: Asymmetric Synthesis, Substrate-Specific Reactions, and Sequential Multi-Component Reactions, *J. Syn. Org. Chem. Jpn.*, **59**, 458-459 (2001) (in Japanese)

Kawabata T: Discrimination of Enantiomers by an Artificial Enzyme, *Bio Review*, **18**, 16-24 (2001), *Advanced Enzyme-based Techniques with Comprehensive Applications*(Aizawa M: Ed.), 71-81 (2001) (in Japanese)

BIOORGANIC CHEMISTRY

I. Organoelement Chemistry

Sasamori T, Arai Y, Takeda N, Okazaki R and Tokitoh N: The First Chemical Trapping of Stibinidene, a Monovalent Antimony Compound, *Chem. Lett.*, 42-43 (2001)

Tokitoh N, Arai Y, Sasamori T, Takeda N and Okazaki R: Formation of Antimony-Sulfur Double-Bond Compounds and Their Trapping with Nitrile Oxides, *Heteroatom Chem.*, **12**, 244-249 (2001)

Tokitoh N and Okazaki R: Recent Advances in the Chemistry of Group 14-Group 16 Double Bond Compounds, *Adv. Organomet. Chem.*, **47**, 121-166 (2001)

Tokitoh N: Synthesis, Structures, and Reactivities of Novel Silacyclic Systems: the First Stable Silabenzene and

Silacyclopropabenzene, *Phosphorus, Sulfur and Silicon*, **168**, 31-40 (2001).

Sasamori T, Takeda N, and Tokitoh N: Novel Disproportionation Reaction of Stable Stibabismuthene via 1,2,3,4-Distibadibismetane Derivative, *Phosphorus, Sulfur and Silicon*, **169**, 89-92 (2001).

Takeda N, Kajiwaru T and Tokitoh N: Reaction of Stable Silylene–Isocyanide Complexes with Boranes: Synthesis and Properties of the First Stable Silylborane–Isocyanide Complexes, *Chem. Lett.*, 1076-1077 (2001)

Itoh M, Takenaka K, Okazaki R, Takeda N and Tokitoh N: The First Stable Aromatic S-Nitrosothiol: Synthesis, Structure and Reactivity, *Chem. Lett.*, 1206-1207 (2001).

Nakata N, Takeda N and Tokitoh N: Synthesis and Structure of a Kinetically Stabilized 2-Germanaphthalene: the First Stable Neutral Germaaromatic Compound, **20**, *Organometallics*, 5507-5509 (2001)

Yasui S, Itoh K, Ohno A and Tokitoh N: Kinetic Deuterium Isotope Effect in Single-Electron Transfer Occurring from Tributylphosphine to Viologens, *Chem. Lett.*, 1056-1057 (2001)

Yasui S, Itoh K and Ohno A: Kinetic Study on Debromination of *vic*-Dibromides with Trivalent Phosphorus Compounds, *Heteroatom Chem.*, **12**, 217-222 (2001)

Ohta M, Nakamura K, Kubo T and Suzuki T: Detoxification Effect of Iron-encaging Zeolite-processed Water in Tributyltin-intoxicated *Euglena Gracilis* Z, *Biosci. Biotech. Biochem.*, **65**, 14-21 (2001)

Matsuda T, Ohashi Y, Harada T, Yanagihara R, Nagasawa T and Nakamura K: Conversion of Pyrrole to Pyrrole-2 Carboxylate by Cells of *Bacillus Megaterium* in Supercritical CO₂, *J. Chem. Soc. Chem. Commun.* 2194 - 2195 (2001)

Matsuda T, Kanamaru R, Watanabe K, Harada T and Nakamura K: Control on Enantioselectivity with Pressure for Lipase Catalyzed Esterification in Supercritical Carbon Dioxide, *Tetrahedron Lett.*, **42**, 8319 - 8321 (2001).

Hamada H, Miura T, Kumobayashi H, Matsuda T, Harada T and Nakamura K: Asymmetric Synthesis of (*R*)-2-Chloro-1-(*m*-chlorophenyl)ethanol Using Acetone Powder of *Geotrichum Candidum*, *Biotechnology Lett.*, **23**, 1603-1606, (2001)

Sato R, Takeda E, Nakajo S, Kimura T, Ogawa S and Kawai Y: Oxidation of 1,4-Dihydro-1,4-diphenyl-2,3-benzodithiin, *Heteroatom Chem.*, **12**, 209-216 (2001)

Kawai Y, Inaba Y and Tokitoh N: Asymmetric Reduction of Nitroalkenes with Baker's Yeast, *Tetrahedron: Asymmetry*, **12**, 309-318 (2001)

Kawai Y, Inaba Y, Hayashi M and Tokitoh N: Asymmetric Synthesis of a Nitroalkane by the Use of Novel Nitroalkene Reductases from Baker's Yeast, *Tetrahedron Lett.*, **42**, 3367-3368 (2001)

Sato R, Utsumi Y, Nakajo S, Ogawa S and Kawai Y: The First Synthesis and Characterization of Bisbenzotrithiole Containing Two Benzotrithioles Linked by an Alkanedioxy Spacer, *Heterocycles*, **55**, 851-854 (2001)

Kitayama T, Yamamoto K, Utsumi R, Takatani M, Hill R K, Kawai Y, Sawada S and Okamoto T: Chemistry of Zerumbone.

2. Regulation of Ring Bond Cleavage and Unique Antibacterial Activities of Zerumbone Derivatives, *Biosci. Biotech. Biochem.*, **65**, 2193-2199 (2001)

Kitayama T, Masuda T, Kawai Y, Hill R K, Takatani M, Sawada S and Okamoto T: The chemistry of zerumbone III. Stereospecific Creation of Five Stereogenic Centers by Double Sharpless Oxidation, *Tetrahedron: Asymmetry*, **12**, 2805-2810 (2001)

Kawai Y, Hayashi M, and Tokitoh N: Asymmetric synthesis of α -chiral ketones by the reduction of enones with baker's yeast, *Tetrahedron: Asymmetry*, **12**, 3007-3013 (2001).

Mikata Y, Mizukami K, Hayashi K, Matsumoto S, Yano S, Yamazaki N and Ohno A: NAD/NADH Models with Axial/Central Chiralities: Superiority of the Quinoline Ring System, *J. Org. Chem.*, **66**, 1590-1599 (2001)

Ohno A, Oda S and Yamazaki N: Stereoselective C4 Alkylation of NAD(P)⁺ Analogs, *Tetrahedron Lett.*, **42**, 399-401 (2001)

[Others]

Takeda N and Tokitoh N: Conjugated Double-bond Compounds Containing Heavier Group 14 Elements, *Kagaku*, **56**, 70-71 (2001) (in Japanese)

Tokitoh N and Takeda N: The Chemistry of Siraaromatic Compounds, *Kagaku Kogyo*, **52**, 926-932 (2001) (in Japanese)

II. Bioactive Chemistry

Hori Y, Bichenkova EV, Wilton AN, El-Attug MN, Sadat-Ebrahimi S, Tanaka T, Kikuchi Y, Araki M, Sugiura Y and Douglas KT: Synthetic inhibitors of the processing of pretransfer RNA by the ribonuclease P ribozyme: enzyme inhibitors which act by binding to substrate, *Biochemistry* **40**, 603-608 (2001)

Uno Y, Matsushita K, Nagaoka M and Sugiura Y: Finger-positional change in three zinc finger protein Sp1: influence of terminal finger in DNA recognition, *Biochemistry* **40**, 1787-95 (2001)

Nagaoka M, Kaji T, Imanishi M, Hori Y, Nomura W and Sugiura Y: Multiconnection of identical zinc finger: implication for DNA binding affinity and unit modulation of the three zinc finger domain, *Biochemistry* **40**, 2932-41 (2001)

Futaki S, Youjun Z and Sugiura Y: Detecting a tag on a channel opening: blockage of the biotinylated channels by streptavidin, *Tetrahedron Lett.* **42**, 1563-65 (2001)

Kurosaki H, Sharma RK, Aoki S, Inoue T, Okamoto Y, Sugiura Y, Doi M, Ishida T, Otsuka M and Goto M: Synthesis, characterization, and spectroscopic properties of three novel pentadentate copper(II) complexes related to the metal-chelating inhibitors against DNA binding with HIV-EP1, *J. Chem. Soc., Dalton Trans.* 441-7 (2001)

Nagaoka M, Nomura W, Shiraishi Y and Sugiura Y: Significant effect of linker sequence on DNA recognition by multi-zinc finger protein, *Biochem. Biophys. Res. Commun.* **282**, 1001-7 (2001)

Futaki S, Araki M, Kiwada T, Nakase I and Sugiura Y: A 'Cassette' RNase: site-selective cleavage of RNA by RNase S equipped with RNA-recognition segment, *Bioorg. Med. Chem. Lett.* **11**, 1165-68 (2001)

Matsushita K and Sugiura Y: Effect of arginine mutation of alanine-556 on DNA recognition of zinc finger protein Sp1, *Bioorg. Med. Chem.* **9**, 2259-67 (2001)

Imanishi M, Hori Y, Nagaoka M and Sugiura Y: Design of novel zinc finger proteins: towards artificial control of specific gene expression, *Eur. J. Pharm. Sci.* **13**, 91-7 (2001)

Kobayashi S, Reddy RS, Sugiura Y, Sasaki D, Miyagawa N and Hirama M: Investigation of the total synthesis of N1999-A2: implication of stereochemistry, *J. Am. Chem. Soc.* **123**, 2887-8 (2001)

Futaki S, Suzuki T, Ohashi W, Yagami T, Tanaka S, Ueda K and Sugiura Y: Arginine-rich peptides: an abundant source of membrane-permeable peptides having potential as carriers for intracellular protein delivery, *J. Biol. Chem.* **276**, 5836-40 (2001)

Nagaoka M, Shiraishi Y and Sugiura Y: Selected base sequence outside the target binding site of zinc finger protein Sp1, *Nucleic Acids Res.* **29**, 4920-29 (2001)

Futaki S, Fukuda M, Omote M, Yamauchi K, Yagami T, Niwa M and Sugiura Y: Alamethicin-leucine zipper hybrid peptide: a prototype for the design of artificial receptors and ion channels, *J. Am. Chem. Soc.* **123**, 12127-34 (2001)

Futaki S, Ohashi W, Suzuki T, Niwa M, Tanaka S, Ueda K, Harashima H and Sugiura Y: Stearilated arginine-rich peptides: a new class of transfection system, *Bioconjugate Chem.* **12**, 1005-11 (2001)

Kobayashi S, Ashizawa S, Takahashi Y, Sugiura Y, Nagaoka M, Lear MJ and Hirama M: The first total synthesis of N1999-A2: absolute stereochemistry and stereochemical implications into DNA cleavage, *J. Am. Chem. Soc.* **123**, 11294-95 (2001)

Araki M, Hashima M, Okuno Y and Sugiura Y: Coupling between substrate binding and allosteric regulation in ribozyme catalysis, *Bioorg. Med. Chem.* **9**, 1155-63 (2001)

[Others]

Nagaoka M and Sugiura Y: Design of artificial novel zinc finger peptides, *J. Inorg. Biochem.* **86**, 352 (2001)

Sugiura Y: Natural and artificial zinc finger proteins, *RIKEN Review* **35**, 102-4 (2001)

Sugiura Y: Zinc proteins which gives orders to genes, *Idenshi no Kinouseigyo* 156-66 (2001) (in Japanese)

III. Molecular Clinical Chemistry

Futaki S, Suzuki T, Ohashi W, Yagami T, Tanaka S, Ueda K and Sugiura Y: Arginine-rich peptides: An abundant source of membrane-permeable peptides having potential as carriers for intracellular protein delivery. *J. Biol. Chem.*, **276**, 5836-5840 (2001)

Chu D, Kakazu N, Gorin-Rivas M J, Lu, H.-P, Kawata M, Abe T, Ueda K and Adachi Y: Cloning and characterization of LUN, a novel RING-finger protein that is highly expressed in lung and specifically binds to a palindromic sequence. *J. Biol. Chem.*, **276**, 14004-14013 (2001)

Minakuchi M, Chu D, Hara Y, Ueda K and Adachi Y: Molecular cloning and initial characterization of SEB, a novel protein that binds to the acute undifferentiated leukemia-associated protein SET. *Eur. J. Biochem.*, **268**, 1340-1351(2001)

[Others]

Yasukawa K, Saitoh J, Hayashi T, Horie R, Itoh S, Ueda K and Ishiguro T: Rapid detection of antibiotic resistance gene expression in MRSA based on the isothermal RNA amplification. *Clin. Chem. Lab. Med.*, **39** (Special Suppl.), S230 (2001).

Ueda K: Enforcement of the ethical guide-line for studies on human genome and genes. *Bioscience and Industry*, **59**, 475-476 (2001) (in Japanese)

Ueda K: The present status of gene diagnosis. *J. Clin. Exp. Med.*, **197**, 967-969 (2001) (in Japanese)

MOLECULAR BIOFUNCTION

I. Chemistry of Molecular Biocatalysts

Guo W, Hiratake J, Ogawa K, Yamamoto M, Ma S-J and Sakata K: β -D-Glycosylamidines - potent, selective, and easily accessible β -glycosidase inhibitors, *Bioorg. Med. Chem. Lett.*, **11**(4), 467-70 (2001)

Ma S-J, Watanabe N, Yagi A and Sakata K: The (3*R*,9*R*)-3-hydroxy-7,8-dihydro-b-ionol disaccharide glycoside is an aroma precursor in tea leaves, *Phytochemistry*, **56**(8), 819-25 (2001)

Ma S-J, Mizutani M, Hiratake J, Hayashi K, Yagi K, Watanabe N and Sakata K: Substrate specificity of β -primeverosidase, a key enzyme in aroma formation during oolong tea and black tea manufacturing, *Biosci. Biotechnol. Biochem.*, **65**, 2719-29 (2001)

Asami T, Mizutani M, Fujioka S, Goda H, Min YK, Shimada Y, Nakano T, Takatsuto S, Matsuyama T, Nagata N, Sakata K and Yoshida S: Selective interaction of triazole derivatives with DWF4, a cytochrome P450 monooxygenase of the brassinosteroid biosynthetic pathway, correlates with brassinosteroid deficiency in plants, *J. Biol. Chem.*, **276**, 25687-91 (2001)

Boehlein S K, Nakatsu T, Hiratake J, Thirumoorthy R, Stewart J D, Richards N G J and Schuster S M, Characterization of inhibitors acting at the synthetase site of *Escherichia coli* asparagine synthetase B, *Biochemistry*, **40**, 11168-75 (2001)

Yamada M, Suzuki K, Mizutani M, Asada A, Matozaki T, Ikeuchi T, Koizumi S and Hatanaka H, Analysis of tyrosine phosphorylation-dependent protein-protein interactions in TrkB-mediated intracellular signalling using modified yeast two-hybrid system, *J. Biochem.* **130**, 158-65 (2001)

[Others]

Fujii R and Hiratake J: Evolutionary molecular engineering of lipases (in Japanese), *Enzyme Engineering News*, **46**, 22-27 (2001)

Sakata K, Mizutani M and Hiratake J: Biochemical and molecular biological studies on β -primeverosidase deeply concerned with floral tea aroma formation during processing of oolong tea and black tea, Proceedings of Pre-Congress Internet Conference May 8-Dec. 31, 2000, 11th World Congress of Food Science and Technology, Seoul, Korea, April 22-27, 2001, p. 16- 18 (2001)

II. Molecular Microbial Science

Uo T, Ueda T, Nishiyama T, Yoshimura T, and Esaki N: Purification and characterization of alanine racemase from hepatopan-

creas of black-tiger prawn, *Penaeus monodon*, *J. Mol. Catal. B: Enzymatic*, **12**, 137-44 (2001)

Watanabe A, Yoshimura T, Lim YH, Kurokawa Y, and Soda K: Stereochemistry of hydrogen abstraction from pyridoxamine phosphate catalyzed by alanine racemase of *Bacillus stearothermophilus*, *J. Mol. Catal. B: Enzymatic*, **12**, 145-50 (2001)

Uo T, Yoshimura T, Tanaka N, Takegawa K, and Esaki N: Functional characterization of alanine racemase from *Schizosaccharomyces pombe*: a eucaryotic counterpart to bacterial alanine racemase, *J. Bacteriol.*, **183**, 2226-33 (2001)

Lewandowicz A, Sicinska D, Rudzinski J, Ichiyama S, Kurihara T, Esaki N, and Paneth P: Chlorine Kinetic Isotope Effect on Fluoroacetate Dehalogenase Reaction, *J. Am. Chem. Soc.*, **123**, 9192-93 (2001)

Kashiwa M, Ike M, Mihara H, Esaki N, and Fujita M: Removal of soluble selenium by a selenate-reducing bacterium *Bacillus* sp. SF-1, *BioFactors*, **14**, 261-5 (2001)

Suzuki T, Nakayama T, Kurihara T, Nishino T, and Esaki N: Cold-Active Lipolytic Activity of Psychrotrophic *Acinetobacter* sp. Strain No. 6, *J. Biosci. Bioeng.*, **92**, 144-8 (2001)

MOLECULAR BIOLOGY AND INFORMATION

I. Biopolymer Structure

Kitano T, Sohrin Y, Hata Y, Kawakami H, Hori T and Ueda K: Selectivity of Sterically Efficient $[\text{HB}(\text{pz})_3]^-$ and Crowded $[\text{B}(\text{pz})_4]^-$ for First-Series Transition Metals and Cd, *J. Chem. Soc., Dalton Trans.*, 3564-3571 (2001)

Maruyama M, Kumagai T, Matoba Y, Hayashida M, Fujii T, Hata Y and Sugiyama M: Crystal Structures of the Transposon Tn5-carried Bleomycin Resistance Determinant Uncomplexed and Complexed with Bleomycin. *J. Biol. Chem.*, **276**, 9992-9999 (2001)

[Others]

Hata Y, Fujii T, Sakai H and Kawata Y: Structure-Based Analysis of Functional Site of a thermostable Aspartase, *Abst. of 4th Meeting of Asian Crystallographic Association*, A6-120 (2001)

Higurashi T, Ichimura K, Mizobata T, Kawata Y and Hiragi Y: Unfolded Structure of *Escherichia coli* co-chaperonin GroES, *Photon Factory Activity Report*, **18**, 236 (2000)

Hiragi Y, Ichimura K, Seki Y, Soda K, Higurashi T and Kawata Y: Direct Detection of Change in Protein Quaternary Structure by Scattering Method; GroEL and GroES, *Abst. of 4th International Conference on Molecular Structural Biology*, 74 (2001)

Izumi Y, Jinbo Y, Kuwamoto S, Miho N, Yoshino H, Hiragi Y and Kihara H: Characterization of transient intermediates of calmodulin-peptide complex, *Photon Factory Activity Report*, **18**, 235 (2000)

Seki Y, Ichimura K, Soda K and Hiragi Y: Analysis of unfolded state of protein by the small-angle X-ray scattering and molecular modeling, *Photon Factory Activity Report*, **18**, 223 (2000)

II. Molecular Biology

Ohgishi M, Oka A, Morelli G, Ruberti I and Aoyama T: Negative autoregulation of the *Arabidopsis* homeobox gene *ATHB-2*, *The Plant Journal*, **25**, 389-398 (2001).

Honma T and Goto K: Complexes of MADS-box proteins are sufficient to convert leaves into floral organs, *Nature*, **409**, 525-529 (2001).

Imajuku Y, Ohashi Y, Aoyama T, Goto K and Oka A: An upstream region of the *Arabidopsis thaliana* *CDKA;1* (*CDC2aAt*) gene directs transcription during trichome development, *Plant Mol. Biol.*, **46**, 205-213 (2001).

Sakai H, Honma T, Aoyama T, Sato S, Kato T, Tabata S and Oka A: ARR1, a transcription factor for genes immediately responsive to cytokinins, *Science*, **294**, 1519-1521 (2001).

[Others]

Aoyama T: Elucidation at a breath? Molecular mechanism of cytokinin signal transduction in plants, *Chemistry*, **56**, 57-58 (2001) (in Japanese).

Aoyama T: Inducible system of protein functions with steroid hormones, In *A laboratory manual of model plants* (K. Okada and K. Shimamoto, eds. Shujunsha Tokyo) pp. 125-128 (2001) (in Japanese).

BIOINFORMATICS CENTER

I. Bioknowledge Systems

Nakaya A, Goto S and Kanehisa M: Extraction of Correlated Gene Clusters by Multiple Graph Comparison, *Genome informatics*, **12**, 44-53 (2001)

Hihara Y, Kamei A, Kanehisa M, Kaplan A and Ikeuchi M: DNA microarray analysis of cyanobacterial gene expression during acclimation to high light. *Plant Cell*, **13**, 793-806 (2001)

Suzuki I, Kanesaki Y, Mikami K, Kanehisa M and Murata N: Cold-regulated genes under control of the cold sensor Hik33 in *Synechocystis*. *Mol Microbiol*, **40**, 235-244 (2001)

Kuroda M, Ohta T, Uchiyama I, Baba T, Yuzawa H, Kobayashi I, Cui L, Oguchi A, Aoki K, Nagai Y, Lian J, Ito T, Kanamori M, Matsumaru H, Maruyama A, Murakami H, Hosoyama A, Mizutani-Ui Y, Takahashi NK, Sawano T, Inoue R, Kaito C, Sekimizu K, Hirakawa H, Kuhara S, Goto S, Yabuzaki J, Kanehisa M, Yamashita A, Oshima S, Furuya K, Yoshino C, Shiba T, Hattori M, Ogasawara N, Hayashi H and Hiramatsu K: Whole genome sequencing of methicillin-resistant *Staphylococcus aureus*, *Lancet*, **357**, 1225-1240 (2001)

Kanehisa M: Prediction of higher order functional networks from genomic data. *Pharmacogenomics*, **2**, 373-385 (2001)

Makabe KW, Kawashima T, Kawashima S, Minokawa T, Adachi A, Kawamura H, Ishikawa H, Yasuda R, Yamamoto H, Kondoh K, Arioka S, Sasakura Y, Kobayashi A, Yagi K, Shojima K, Kondoh Y, Kido S, Tsujinami M, Nishimura N, Takahashi M, Nakamura T, Kanehisa M, Ogasawara M, Nishikata T and Nishida H: Large-scale cDNA analysis of the maternal genetic information in the egg of *Halocynthia roretzi* for a gene expression catalog of ascidian development, *Development*, **128**, 2555-2567 (2001)

[Others]

Kihara D and Kanehisa M: Prediction of membrane proteins in post-genomic era, *Recent Res Devel Protein Eng*, **1**, 179-196 (2001)

Sato Y, Nakaya A, Shiraishi K, Kawashima S, Goto S and Kanehisa M: SSDB: sequence similarity database in KEGG, *Genome Informatics*, **12**, 230-231 (2001)

Igarashi Y, Okuno Y, Vert JP and Kanehisa M: Detecting Transcriptional *cis*-Regulation from Gene Expression Data, *Genome informatics*, **12**, 241-242 (2001)

Yoshizawa AC, Nakaya A, Goto S and Kanehisa M: Extraction of Related Genes in the Vesicular Transport by Simultaneous Comparison of Two-hybrid and Microarray Data, *Genome informatics*, **12**, 243-244 (2001)

Maria ME, Katayama T and Kanehisa M: Discovery and Classification of Peptide Family G-Protein Coupled Receptors in the Human Genome Sequence, *Genome informatics*, **12**, 352-353 (2001)

Kawashima S, Kawashima T, Nakaya A, Makabe KW, Goto S and Kanehisa M: Analysis of the maternal mRNAs encoding DNA-binding motifs in the ascidian egg using SSDB, *Genome informatics*, **12**, 386-387 (2001)

Itoh M, Okuji YK, Goto S, Urushihara H, Maeda M, Tanaka Y and Kanehisa M: Analysis of *Dictyostelium discoideum* cDNA Obtained from Multicellular and Unicellular Stages, *Genome informatics*, **12**, 400-401 (2001)

Goto S and Kanehisa M: Pathway analysis towards drug discovery, *Experimental Medicine*, **19**, 1475-1480 (2001) (in Japanese)

Goto S and Kanehisa M: Genome science: Systematic construction of biological knowledge base, *The Journal of the Institute of Electronics, Information and Communication Engineering*, **84**, 341-345 (2001) (in Japanese)

Kawashima S and Kanehisa M: Prediction of protein interaction networks based on genome information, *Protein, Nucleic Acid and Enzyme*, **46**, 2521-2525 (2001) (in Japanese)

Kawashima S: Bioinformatics in post-genome analysis, *Igaku no ayumi*, **196**, 107-110 (2001) (in Japanese)

Kawashima S and Kanehisa M: Fusion of life science and computer science: Bioinformatics, *Experimental Medicine*, **19**, 14-18 (2001) (in Japanese)

Hattori M and Kanehisa M: The Initiation of Genome Informatics Science, *Computer Today*, **18**-1, 4-10 (2001) (in Japanese)

Katayama T and Kanehisa M: Modeling of the molecular interaction network, *Simulation*, **20**, 114-117 (2001) (in Japanese)

Igarashi Y, Kanehisa M: The potentiality of bioinformatics, *Medical forum CHUGAI*, **5**-3, 30-34 (2001) (in Japanese)

Kanehisa M: Invitation to post-genome informatics, *Kyoritsu shuppan*, 2001 (in Japanese)

Makabe KW, Kawashima T, Kawashima S, Sasakura Y, Ishikawa H, Kawamura H, Kanehisa M, Nishikata T and Nishida H: Maternal genetic information stored in fertilized eggs of the ascidian, *Halocynthia roretzi*. In "The Biology of Ascidians" (Sawada H, Yokosawa H, Lambert CC eds.), *Springer*, 165-177 (2001)

Kawashima S: Clustering of gene expression profiles, In "System biology no tenkai" (Kitano H ed.), *Springer*, 131-140 (2001) (in Japanese)

Hattori M and Kanehisa M: Metabolic Cascade Database, In "System biology no tenkai" (Kitano H, ed.), *Springer*, 59-68 (2001) (in Japanese)

Hattori M and Kanehisa M: The Initiation of Genome Informatics Science, In "The Expansion of Bioinformatics" (Bessatsu Surikagaku), *Saiensu-sha*, 14-21 (2001) (in Japanese)

Katayama T and Kanehisa M: Reproduction of Life in the Computer. In "Human genome saizensen" (Bessatsu Kagaku), *Kagakudoujin*, 75-81 (2001) (in Japanese)

Katayama T and Kanehisa M: Bioinformatics on the genes, In "Understanding advanced gene technology" (Yamamoto T ed.), *Yodoshia*, 81-89 (2001) (in Japanese)

II Biological Information Network

Akutsu T and Horimoto K: Local Multiple Alignment of Numerical Sequences: Detection of Subtle Motifs from Protein Sequences and Structures, *Genome Informatics*, **12**, 83-92 (2001)

Akutsu T: A Local Search Algorithm for Local Multiple Alignment: Special Case Analysis and Application to Cancer Classification, *Proc. Int. Conf. Parallel and Distributed Processing Techniques and Applications*, 1284-1290 (2001)

Maruyama K, Miwa K, Tsujii N, Nagai T, Tomita N, Harada T, Sobajima H and Sugisaki H: Cloning, Sequencing, and Expression of the Gene Encoding 4-hydroxy-4-methyl-2-oxoglutarate Aldolase from *Pseudomonas Ochraceae* NGJ1, *Bioscience, Biotechnology, and Biochemistry*, **65**, 2701-2709 (2001)

[Others]

Akutsu T: Current Topics in Genome Informatics, *Keisoku to Seigyo*, **40**, 460-465 (2001) (in Japanese)

Akutsu T: Algorithms for Inferring Genetic Networks, *Seimei Jouhou Kagaku no Hirogari*, 38-44, Saiensu-Sha (2001)(in Japanese)

Akutsu T: Inference Algorithms for Genetic Networks, *Tanpakusitsu Kakusan Kousou*, **46**, 2505-2509 (2001)(in Japanese)

III Pathway Engineering

Akutsu T and Miyano S: Selecting informative genes for cancer classification using gene expression data, *Proc. IEEE-EURASIP Workshop on Non-linear Signal and Image Processing - NSIP-01*, 1-6(2001).

Bannai H, Tamada Y, Maruyama O, Nakai K, Miyano, S: Extensive feature detection of N-terminal protein sorting signals, *Bioinformatics*, in press.

Bannai H, Tamada Y, Maruyama O, Miyano S: VML: a view modeling language for computational knowledge discovery, *Lecture Notes in Artificial Intelligence* 2226, 30-44 (2001).

Bannai H, Tamada Y, Maruyama O, Nakai N, Miyano S: Views: fundamental building blocks in the process of knowledge discovery, *Proceedings of the 14th International FLAIRS Confer-*

ence, AAAI Press, 233-238 (2001).

Bannai H, Tamada Y, Maruyama O, Miyano S: HypothesisCreator: concepts for accelerating the computational knowledge discovery process, Linkoping Electronic Articles in Computer and Information Science Vol. 6, in press.

Imoto S, Goto T, Miyano S: Estimation of genetic networks and functional structures between genes by using Bayesian networks and nonparametric regression, PSB 2002, in press.

Maruyama O, Shoudai T, Furuichi E, Kuhara S, Miyano S: Learning conformation rules, Lecture Notes in Artificial Intelligence 2226, 243-257 (2001).

Matsuno H, Doi A, Hirata Y, Miyano S: XML documentation of biopathways and their simulations in Genomic Object Net, Genome Informatics 12, 54-62 (2001).

Miyano S and Rangahathan S: The Asia-Pacific Regional Perspective on Bioinformatics, IEEE Intelligent Systems 16(6), 19-20 (2001).

Onami S, Hamahashi S, Nagasaki M, Miyano S, Kitano H: Automatic acquisition of cell lineage through 4D microscopy and analysis of early C. elegans embryogenesis, Foundations of Systems Biology, Kitano, H. (ed.), MIT Press, 39-55 (2001).

Sim KL, Uchida T, Miyano S: ProDDO: a database of disordered proteins from the Protein Data Bank (PDB), Bioinformatics 17(4), 379-380 (2001).

Tamada Y, Bannai H, Maruyama O, Miyano S: Foundations of designing computational knowledge discovery processes, Progresses in Discovery Science (Lecture Notes in Artificial Intelligence), Springer-Verlag, in press.

[Others]

Bannai H, Iida K, Shinohara A, Takeda M, Miyano S: More speed and more pattern variations for knowledge discovery system BONSAI, Genome Informatics 12, 454-455 (2001).

Doi A, Yamane R, Yamasaki N, Yoshimori H, Murakami R, Matsuno H, Miyano S: Simulation of the pattern formation in multicellular organism by Genomic Object Net, Genome Informatics 12, 288-289 (2001).

Hirata Y, Matsuno H, Sasaki M, Miyano S: Genomic Object Net: Petri net enhancement for multi-cellular processes, Genome Informatics 12, 292-293 (2001).

Matsuda H, Wong L, Miyano S, Takagi T (eds.): Genome Informatics 2001, Universal Academy Press, 2001.

Matsui M, Doi A, Matsuno H, Hirata Y, Miyano S: Biopathway model conversion from E-Cell to Genomic Object Net, Genome Informatics 12, 290-291 (2001).

Matsuno H, Doi A, Drath R, Miyano S: Genomic Object Net: hybrid Petri net for describing biological systems, Currents in Computational Molecular Biology 2001, El-Mabrouk N, Lengauer T, Sankof D (eds.), Les Publications CRM, Montreal, 233-234 (2001).

Matsuno H, Doi A, Fujita S, Sasaki M, Hirata Y, Miyano S: Genomic Object Net: XML visualization of simulation results from biological modeling on hybrid functional Petri net, Genome Informatics 12, 239-240 (2001).

NUCLEAR SCIENCE RESEARCH FACILITY

I. Particle and Photon Beams

Iwashita Y: High Gradient Air Core Cavity for Long Bunch, Nucl. Inst. & Meth. A, **472**, 645-651 (2001)

Morita A, Iwashita Y, Noda A, Shirai T, Tongu H, Umezawa M, Hiramoto K and Tadokoro M: Design and Measurement of a Combined Function Magnet Intended for a Cancer Therapy Accelerator, Phys. Rev. ST-AB, 122401 (9 Pages) (2001)

Urakabe E, Kanai T, Kanazawa M, Kitagawa A, Noda K, Tomitani T, Suda M, Iseki Y, Hanawa K, Sato K, Shimbo M, Mizuno H, Hirata Y, Futami Y, Iwashita Y and Noda A: Spot Scanning Using Radioactive ^{11}C Beams for Heavy-Ion Radiotherapy, Jap. J. Appl. Phys. **40**, 2540-2548 (2001)

[Others]

Ao H, Iwashita Y, Shirai T, Noda A, Inoue M, Kawakita T, Ohkubo K and Nakanishi K: High Power Model Fabrication of Bipolar L-Support Disk-and-Washer Structure, Proceedings of the XX International Linac Conference, Monterey, USA 431-433 (2000)

Daido H, Yamakawa K, Yamagiwa M, Arisawa T, Kato Y, Noda A, Uesaka M, Ogata A and Matsukado M: Development of a Laser-Plasma Ion Source at the Advanced Photon Research Center, Proc. of the 4th Symp. on Accelerator and Related Technology for Application, Tokyo Japan, 111-112 (2001)

Fadil H, Shirai T, Iwashita Y, Noda A, Noda K, Beutelspacher M: Electron Cooling of Large Momentum Spread Beam, Applied Electromagnetics and Mechanics, **9**, 381-382 (2001)

Fadil H, Shirai T, Noda A, Iwashita Y, Grieser M, Beutelspacher M and Noda K: Electron Cooling of Ion Beams with Wide Momentum Spread: Proc. of the 13th Symposium on Accelerator Science and Technology, Osaka, Japan, 396-398 (2001)

Iwashita Y: DFQ—Double Frequency RFQ, Proceedings of the XX International Linac Conference, Monterey, USA 318-320 (2000)

Iwashita Y, Ao H, Inoue H, Shirai T, Tongu H and Noda A: R&D of Bipolar DAW, Beam Science and Technology, Activity Report of NSRF ICR Kyoto Univ., **6**, 1-2 (2001)

Iwashita Y, Morita A, Noda A, Shirai T, Tongu H: Glitch Removal from Ramping Current of Magnet Power Supply, Beam Science and Technology, Activity Report of NSRF ICR Kyoto Univ., **6**, 7-10 (2001)

Iwashita Y: Another Phase Rotator (Energy Compression Linac) MHIC, OMHIC, MHOMIC and CPEC, KEK International Workshop on High Intensity Muon Sources, Tsukuba, Japan, 1-4 Dec, 1999, World Scientific, Singapore, pp.307-314 (2001)

Iwashita Y and Morita A: LINAC BASED PRISM, Proc of the 26th Linear Accelerator Meeting in Japan, Aug. 1-3, Tsukuba, Japan, 144-146, (2001) (in Japanese)

Iwashita Y and Morita A: Distributed Modulating Buncher, Proc. of the 13th Symposium on Accelerator Science and Technology, Osaka, Japan, 337-339 (2001)

Kumada M, Fujisawa T, Hirao Y, Iwashita Y, Endo M, Aoki M, Kohda T, I.Bolshakova, R.Holyaka: Challenge to a High Field Permanent Magnet of Variable Field Strength, Proc. of the 13th

Symposium on Accelerator Science and Technology, Osaka, Japan, 92-94 (2001)

Lombardi A, Bisoffi G, Pisent A, Andreev V, Badan L, Bassato G, Battistella A, Bezzon G, Bissiato E, Daney D, Dainese N, Canella S, Cavenago M, Cervellera F, Chiurlotto F, Comunian M, Conventi D, Dewa H, Facco A, Favaron P, Gambalonga S, Lollo M, Kulik I, Moisio M.F, Marigo S, Palmieri V, Poggi M, Porcellato A.M, Poletto F, Rigato M, Scarpa F, Shirai T, Stivanello F, Stark S, Zviagintsev V: PIAVE the Legnaro New Positive Ion Injector Based on Superconducting RFQs, *Proceedings of the XX International Linac Conference*, Monterey, USA 356-358 (2000)

Miyauti Y, Nakajima S, Tokura S, Hirata A, Shouji K, Noda A, Iwashita Y, Shirai T and Endo K: Preliminary Study of the Feasibility of Pulse High Field Compact Synchrotron for Medical Use, *Activity Report of NSRF ICR Kyoto Univ.*, **6**, 24-29 (2001)

Morita A and Iwashita Y: Timing Synchronizer between Injector and KSR, *Beam Science and Technology*, *Activity Report of NSRF ICR Kyoto Univ.*, **6**, 1-2 (2001)

Morita A and Iwashita Y: Focal Characteristic of Helical Quadrupole Focusing Channel, *Proc. of the 13th Symposium on Accelerator Science and Technology*, Osaka, Japan, 328-330 (2001)

Nakamura S, Morita A, Iwashita Y, Shirai T, Noda A, Daido H and Kato Y: Phase Rotation Scheme of the Ions Accelerated by an Intense Femtosecond Laser, *Electromagnetics and Mechanics*, **9**, 377-378 (2001)

Nakamura S, Iwashita Y, Morita A and Noda A: Peak Formation with Use of a Synchronized RF in Ion Production from Pulse-Laser Ion Source, *Proc of the 26th Linear Accelerator Meeting in Japan*, Aug. 1-3, Tsukuba, Japan, 168-170, (2001) (in Japanese)

Noda A, Fujita H, Iwashita Y, Morita A, Shirai T, Sugimura T and Tonguu H: Stretcher Operation of the 100 MeV Disc-Load Electron Linac at ICR, Kyoto University, *Proceedings of the XX International Linac Conference*, Monterey, USA 624-626 (2000)

Noda A, Fadil H, Iwashita Y, Morita A, Nakamura S, Shirai T, Beutelspacher M, Grieser M, Noda K, Daido H, Yamagiwa M and Kato Y: Collection and Cooling Scheme of Heavy Ions Produced by a High Power Pulse Laser, *Activity Report of NSRF ICR Kyoto Univ.*, **6**, 21-23 (2001)

Noda A, Fadil H, Iwashita Y, Morita A, Nakamura S, Shirai T, Tongu T, Grieser M, Beutelspacher M, Yamada S, Noda K, Daido H, Yamagiwa M and Uesaka M, Compact Ion Accumulation and Cooler Ring in Combination with Laser, *Proc. of the 13th Symposium on Accelerator Science and Technology*, Osaka, Japan, 125-127 (2001)

Noda A, Fadil H, Iwashita Y, Morita A, Nakamura S, Shirai T,

Beutelspacher M, Grieser M, Yamada S, Noda K, Daido H and Yamagiwa M: Laser Ion Source Followed by Electron Cooler as Injector of Compact Synchrotron Dedicated for Cancer Therapy, *Proc. of the 4th Symp. on Accelerator and Related Technology for Application*, Tokyo Japan, 107-110 (2001)

Noda K, Shibuya S, Furukawa T, Muramatsu M, Honma T, Fukushima T, Izumiya H, Ogawa H, Iwashita T, Noda A, Fadil H, Shirai T, Nagafuchi T, Maeda K, Uchiyama H, Takada E and Yamada S: Electron Cooling Experiment at HIMAC, *Proc. of the 13th Symposium on Accelerator Science and Technology*, Osaka, Japan, 100-102 (2001)

Shirai T, Iwashita Y, Tongu H, Sugimura T, Morita A, Noda A, Lee T-Y: Status of the Beam Accumulation at KSR, *Proc. of the 13th Symposium on Accelerator Science and Technology*, Osaka, Japan, 184-186 (2001)

Shirai T, Iwashita Y, Tongu H, Sugimura T, Morita A, Noda A, Lee T-Y: Beam Accumulation and Instability at the Injection time for KSR, *Genshikaku Kenkyu*, **Vol.46** No.1, 59-68 (2001) (in Japanese)

Shirai T, Iwashita Y, Tonguu H, Noda A: Klystron Replacement for 100 MeV Electron Linac at ICR Kyoto University, *Beam Science and Technology*, *Activity Report of NSRF ICR Kyoto Univ.*, **6**, 3-6 (2001)

Tongu H, Shirai T, Fujita H, Sugimura T, Iwashita Y and Noda A: Dependence of the Vacuum for the Beam Life in KSR, *Activity Report of NSRF ICR Kyoto Univ.*, **6**, 14-16 (2001)

Tongu T, Shirai T, Sugimura T, Iwashita Y, Morita A and Noda A: Upgrade of the Vacuum System in KSR, *Proc. of the 13th Symposium on Accelerator Science and Technology*, Osaka, Japan, 250-252 (2001)

Yamazaki A, Noda A, Iwashita Y, Shirai T and Tonguu H: X-Ray Production with Laser Thomson Scattering at KSR, *Electromagnetics and Mechanics*, **9**, 345-346 (2001)

II. Beams and Fundamental Reaction

[Others]

Yamamoto K, Tada M, Kishimoto Y, Kominato K, Shibata M, Ooishi C, Yamada S, Saida T, Funahashi H, Masaike A and Matsuki S: The Rydberg-atom-cavity axion search, *Proceedings of the International Symposium on the Dark Matter in the Universe*, Heidelberg Germany, (Springer, Heidelberg, 2001) p213 - 218.

Tada M, Kishimoto Y, Shibata M, Kominato K, Ogawa I, Funahashi H, Yamamoto K and Matsuki S: A Coupled Microwave-Cavity System in the Rydberg-Atom Cavity Detector for Dark Matter Axion Search, *LANL Preprint Archive*, Physics/0101028.